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THE

AMERICAN FARMER,

CONTAINING

ORIGINAL ESSAYS AND SELECTIONS

ON

AGRICULTURE, HORTICULTURE,

RURAL AND DOMESTIC ECONOMY,

AND

INTERNAL IMPROVEMENTS;

WITH

ILLUSTRATIVE ENGRAVINGS AND THE PRICES OF COUNTRY PRODUCE.

JOHN S. SKINNER, EDITOR.

> " *O fortunatos nimium sua si bona norint,*
> " *Agricolas.*"............VIRG.

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CONTENTS OF VOL. V.

A.

A. communicates experiment with naked barley—remarks on impositions practised by sellers of seed – and recommends small trials of – worthless nature of the Heligoland bean comparison of his best crops in Kent county with premium crops in the Eastern States 11.
A. another A. gives "signs of a poor farmer" 13.
ABORTION in cows, most prevalent cause of 167.
ACACIA or locust tree, natural history and uses of 374 --How easily propagated 15, 396.
ACCUM, Frederick, on the adulteration of food 196
ACID, pyroligneous, used for curing hams 367.
ADDRESSES, Agricultural, one of James M. Garnett, Esq. to the Fredericksburgh Society in 1823, 325
——Extracts from one by Jonathan Roberts to the Pennsylvania Society 306.
——Ditto from one by W. M Barton to the "Society of the Valley" 345.
—— One by I. C. Bates to the Hampshire, Franklin and Hampden Society 361.
——By the Trustees of the Gardiner Lyceum 217.
——By B Hale, Principal of the Gardiner Lyceum, and Professor of Natural History 25.
—— By T. Pickering to the Mass. Ag. Soc. 97, 106
ADLUM, Major John, on the wines of France, and the capacity of the United States for the production of wines 134—presents various kinds of wines to the editor, with remarks on each kind 63
A FARMER of Buck's county, on the propagation of the Hessian fly 34.
AGRESTIS on the composition, effects and value of marl as found and used in Maryland 387.
AGRICOLA on turnips and rape culture 376—on the diseases of peach trees 118—on the culture and value of ruta baga 101—his opinion on the operation of lime 98.
——A North Carolina farmer, on the best mode of making cider 125.
AGRICULTURE, Board of, in North Carolina, first meeting of and election of officers 293.
——Axioms in 56—code of translated into French 53 —interesting view of. in a letter from G. R. to Dr. J. M. of Philadelphia, of Spain and Portugal 65—of Tuscany 29.
AGRICULTURAL SOCIETIES—of ALLEGANY COUNTY, Penn. account of its first exhibition and fair 77.
——BARNWELL DISTRICT, (S. C.) its distribution of premiums 401—offer of premiums for 1824 414.
——ESSEX, premiums offered by 33.
——FREDERICKSBURG, account of its second exhibition 370.
——MARYLAND, meets in April, 1823, and resolves to form two independent societies, appoints a committee to frame a new constitution, and passes sundry resolutions 48—notice of time and place of next exhibition 56—premiums to be awarded at cattle show No. 4, in No . 70– special meeting called to receive report of committee on the new constitution 104—new constitution of, proposed and adopted 120—Trustees of, hold their first meeting at Hampton, and make arrangements for cattle show, No. 4, 222—remarks on their duties 222—adopts rules and regulations for the government of the next cattle show to be held on the 5th and 6th Nov. 1823, 255—full account of cattle show and fair No 4, in November, 1823 273—meets and elects officers for the ensuing year for the western shore 296—meeting on and election of officers for the eastern shore 296---sundry resolutions passed by 296.
——Of MASSACHUSETTS, list of its officers for 1823 109 passes vote of thanks to Admiral Coffin for his valuable present of a bull of the improved short horn breed 195—reports of its committees, Oct. 1823, on fat oxen, bulls and bull calves 257—on milch cows 258—on inventions 258—on manufactures 259—on ploughing with oxen 26.
——Of MIDDLESEX Husbandmen and Manufacturers, premiums awarded by for greatest crop of Indian corn 348.
——Of PENNSYLVANIA, premiums offered for distribution at their first exhibition to be held in October, 1823, 13 —full account of their first cattle show, held October, 1823, 313—meeting of under act of incorporation, and election of officers on the 10th Jan. 1824 for the ensuing year 356.
——Of PHILADELPHIA, meeting of and exhibitions of various productions made to 14.
——Of SOUTH CAROLINA, premiums offered by for 1825, 227.
——Of EAST TENNESSEE, their constitution adopted 386.
——OF THE VALLEY, account of their first cattle show and distribution of premiums 345.
AGRICULTURAL advantages of U. S. 27.
——Schools, remarks on the importance of 6.
ALBION, his letters to his son—one giving a description of the Albion farm 11—on the relations between landlords and tenants 108—on the cattle of the Albion farm, with remarks on various breeds 115—on the Horses of the Albion farm, with remarks on various breeds 152—on the choice of horses 180.
AMOR PATRIÆ remarks on orchard grass 402.
AN Agriculturist of Delaware on rearing calves 132
A New-Jersey Farmer on Lucerne 214.
ANIMAL Food, some nations live wholly on 205.
——Life, the duration of, and the temperature suited to different species of 60.
ANIMALS. changes which occur in the quantity of their clothing 250.
——Domestic, names of at different ages 298—on the diseases of 124—when they shed their teeth and how to know their age 315—on their diseases and the cure of them 117.
A NORTH CAROLINA FARMER on fruit trees, vermin on cattle, &c. &c. 30.
APPLES, different kinds described and recommended 28.
ASHES, nature, price and analysis of; crops for which, and soils where, used with advantage; manner of applying quantity per acre; effect of on grass and arable lands 41—on the use of with plaster 46.
ASSOCIATION, the Maryland, for improving breed of horses 222.
A. R. on breeding sheep 222.
A YOUNG FARMER on mowing hay 46.

B.

BARTON W. M. account of Hydrophobia, and its effects on sheep 5.—gives an account of extraordinary crop of corn, made in N. York 335.—extract from his address to the agricultural society of the Valley 345—remark on cheat 208.
——Mr. P. C. recommends chicory as best substitute for coffee 3.
BARLEY Naked, on the culture of 11—experiments in reaping at different stages of its growth with results 403
BARNEY JOHN, of Delaware, account of his large hog 40.
BAKER, JOHN, describes the method of gelding heifers, swine, &c. 298.
BALTIMORE, her exports in 1793, 1802, 1818, 1820 25.
BARNARD, ROBERT, remarks on English and Virginia thorn, and recommends crab-trees for hedges; imports, and recommends the perennial rye-grass, seeds of various turnips 189.
BATES, J. C. his address to the Hampshire agricultural society 361.
BEANS, a particular kind recommended 47.
BEES, on the management of, by Seth Couch 206.
——hives for 45.
BEE HOUSE, description of an elegant one of Mr. James Clarkes 302.
——MILLER, how to destroy 45.
BENTON, Thos. H. on the natural productions of the west 4.
BESNARD, PETER, his report on the culture and treatment of flax in Holland and Ireland 152, 156, 163 170.
BEEF, how to cure and keep it sweet 166.
BEER OF HOPS, how to make 71.
BEEVES, very fine ones slaughtered in Baltimore by Mr. Elmore 16.
BEESLY, THOMAS, on the Hessian fly 165.
BELLINGER, DR. G. sends three kinds of peas 48
BENE PLANT, Dr. James Smith, on the medical uses of 331.
——the oil of its seed highly recommended as not inferior to sweet oil, by J. F. Smith 388.
BERRY, HENRY, his conditional acceptance of challenge to shew Herefords against short horns 2 7.
BIOGRAPHICAL Dictionary, by T. I. Rogers, highly recommended by H Niles 55.
BLACK, Doctor S., called on for a statement of the effects of his system of improvement 359 enquiries after the practical result of his theories by Ephraim Buck 47.
BONNET, made of grass, account of a remarkable one 279.
BONNETS, extensive manufacture of in Mass. 367.
BOTTS, in horses, remarks on by J. Haslam 103—remarks on by a subscriber 166—in horses, how best cured, by Nimrod Owings, Esq. 214—singular cure for 208.
BOTANICAL Garden, in New York 28.
BOYLE, JAMES, communicates extracts from English laws respecting the tanning of leather 312.
BRACEY. DR. on the rot in cotton 1[illegible], 16, 26.
BRANDY, Apple and peach, on the distilling of, by Joseph Cooper 94.
BREWERY, Barclay's in England description of, by Professor Griscom 222.
BRIGG'S, ISAAC, on canals and internal improvements, to the citizens of Maryland 123.
BROWN, Dr. George on the use of the waters of the sweet springs 152.
BRUSH, description of one to destroy caterpillar's nests, by the Hon. T. Pickering 85.
BUCK, Ephraim, enquires after the result of doctor Black's experiments 47.
BUCKNER, R. B favours the opinion that wheat turns to cheat, and recommends how to avoid cheat 332.
BUDDING, interesting remarks on, by C. Harrison 383.

BUEL, Judge J. of Albany, makes a valuable communication on the culture and comparative value of various grasses 289, 297—entertains a more favorable opinion of Fiorin grass, and why 316—on the preservation, time and manner of sowing various seeds 394—on the application of stable manures 219—letter respecting a large breed of sheep, and manufacturing worsted 72.
BULL, presented by Admiral Coffin to the Mas. Agricultural Society 195.

C.

CABBAGE made into sour crout and exported 53—perrenial, notice of 182—on the preservation of 2.9.
CALHOUN, the Hon. J. C. sends tobacco seed from the Rocky Mountains 167—his report on internal improvements 172.
CALIGRAPHY, or improvement in the art of writing described 398.
CALVERT County, remarks on the agriculture and general appearance of by the editor 160.
CALVES, on the best mode of raising 132—on the rearing and management of 172.
CANADENSIS Bromus or Cheat, origin of 22.
CANAL across the Isthmus of Darien 7—the Raritan 7
——Susquehanna 113, 121, 129, 145, 161—on the importance of 89, 105—remarks on 61—remarks on by W. Kenworthy 73, 81, 153.
——From Baltimore to Conewago, reports of Commissioners 293, 299.
——Chesapeake and Delaware, 25, 105—remarks on 44—progress of 55.
——Hudson and Delaware 43.
——Route recommended for one from Potowmac to Baltimore by J. Hughes 81.
——Union 103.
——To join from Potowmac and Susquehanna 161.
CANALS and Roads, report on by J. C. Calhoun 281
——Remarks on by Isaac Briggs 122.
——Union of Potowmac and Susquehanna 169.
CANDLES not so cheap as oil, proved by experiment 313.
CARDS, playing, origin of 413.
CARPENTER, H. A. his experience of improved short horns as milkers 115.
CARROTS, sample of and letter on the culture of from T. Harris 295.
CASTRATION, when best performed on domestic animals 167.
CATERPILLARS, a brush to destroy them described and recommended by the Hon. T. Pickering 85
CATTLE, importation of suggested 18—vermin on, how to destroy 30—observations on fattening 218—diseases of in Talbot county 245—editorial remarks on 245—are certain disorders of occasioned by eating turnip tops 263—various breeds of and accounts of large oxen 337—remarks on various breeds 353—disorders of in Kentucky 357—number of and of sheep killed in the Smithfield market from 1789 to 1824, and average price of wheat for same time 358—the "rubbing disorder" in, as observed in the State of Missouri, by John Hardeman 389—disorders of in Ohio, observed and described by S. P Hildreth 401.
——And Horses, remarks on certain diseases of by S. B. D. 359.
——Herefords and Short Horns compared with others, and terms of agreement to shew them against each other, between the Duke of Bedford and the Right Hon. Charles Arbuthnot 221.
——Improved Short Horns, their properties and qualities 74—their qualities as milkers 115—account of remarkable ones 353.
——Improved Durham Short Horns, some remarks on Mr. Champion's and on the qualities of that race in general, by J. H. Powel 394.
——North Devon, price of in England 20.
——Norfolk polled recommended and wanted 28—brindle colour much esteemed 28.
——Tuscan, some account of Mr Middleton's 303, 367.
CATTLE SHOW of Maryland Agricultural Society, notice of next on the western shore 56—No. 4 222—rules and regulations for the government of 255—remarks on the one to be held in Nov. 1823, with remarks on the evidence to be given by claimants 240—account of with all the reports 273.
——One of Fredericksburgh Agricultural Society 370
——First annual one of Pennsylvania Ag. So. 313.
CATTLE SHOW, Brief account of an interesting one at Washington, Penn. 340.
——Of Allegany county, Penn. 77.
——At Hillsborough, report of committee on working cattle 253.
CHALLENGE of Mr. Smythies to show Herefords against Short Horns 200—accepted 207.
CHARCOAL used and recommended as a cathartic 316
CHEAT, on the origin of 22, 82—remarks on 114—remarks on by S. V. S. 131—experiments recommended to ascertain its origin 167—remarks on by B. C. 189—do. by W. M. Barton 208—do. by R. B. Buckner 332.
CHESAPEAKE and Delaware Canal, remarks on 44
CHESNUTS, French, specimens of large ones 15.
CHICORY, best substitute for coffee 3—directions for using 4.
CHILDERS, Flying, his performance 127.
CIDER, premium offered for 34—remarks on the best modes of making by Agricola 124—how best made 174.
CISTERNS to receive and keep rain or other water, 85—description of by J. R. Gowan 86.
CLARKE, James, describes a very complete bee house 302.
CLAY land, how affected by frost 2.
——Burning 45—remarks on by T. Pickering 98.
——Or argil defined as connected with soils 380.
CLIMATE as connected with the naturalization of plants 58.
——Of England and America compared, in reference to the agricultnral advantages and disadvantages of the two countries 413.
CLINTON, De Witt, remarks on the natural history o the Columba Migratoria, or passenger pigeon 198—presents the seed of a hardy species of rice 212
CLOVER, white, recommended 389.
COCKE, J. H. on the diseases of peach trees 118—remarks on the Hessian fly 241.
COCKROACHES, how to kill 414.
CODE of Agriculture translated into French 53.
COFFEE, Rye, not so good as chickory 3—bad effects of 4—West India best substituted by chicory 3.
——Pot, newly invented described 245.
COFFIN, Admiral, presents a bull of improved short horn breed to the Massachusetts Agricultural Society 195—vote of thanks to by Mass. Ag So. for his present 195.
COKE of Norfolk, opinion of plaster 65—unbounded hospitality and particular kindness to Americans 65
COMMERCE, Chambers of, hostile to manufactures—their arguments examined 17.
CONGRESS should pass a law for a public garden at Washington 98.
CONSULS and Ministers should send home seeds, plants, trees, &c. 28.
COOKERY a branch of chemical science 205.
COOPER, Joseph, on distilling apple and peach brandy 94.
CORN, we have already the best kinds 28.
——Guinea 46—very productive; good food for poultry and horses; good substitute for rice 47.
——Indian, remarks on the culture of by Captain James 49—great yield, and best method of planting it 264.
CORRY, James, letter of instructions to Peter Bernard to examine the culture of flax in Holland 148
COTTON, exports of this year 19 rot in 23—on the rot in by Dr. Bracey 12, .6—may be raised in the northern states 27—remarks on the culture of by Capt. James 49—produce of Illinois 79.
COUCH, Seth, on the management of bees 206.
COULTER, of the plow, on the construction of by Gideon Davis 1.
COWS, milch, remarks on the improvement and produce of 35.
——Of native blood, premiums for and remarks on 35
——For the dairy, remarks on by R. Haines 69.
——Of the Suffolk and Norfolk polled breed highly recommended 167.
——On abortion in 167.
COWS and horses, how fed in different districts of Flanders 410.
COXE, Wm. on the management of millet 24—on the diseases of peach trees 118.
CRAB or crop grass, W. B. Seabrook's letter on 295
CRAIG, J. D. on the practicability of obtaining water by boring 163.
CRAMP, how prevented 245.
CRŒSINUS on ice and ice houses 242—valuable communication from on the extirpation of garlic 382
CROPS, green, rotation of for soiling recommended; turning recommended and premium offered for; mode in doing it described 33.
C. S. on the culture of sea kale 202.
CUI-BONO, comparison of dead with live fences 243
CURWEN on short horned cattle, on various breeds of cattle, and on animal secretion of milk and fat 74—on millet, management of cattle, &c. 270
CUSTOM HOUSE Books not the proper standard to measure a nation's prosperity—returns of, fallacy of arguments drawn from 51.
CUTS, shovel ploughs 1—barshare do. 1—substratum do. 1—deep and shallow ploughing to shew when useful 2—view of drill husbandry 9—Pope's threshing machine 21—bee hives 45—machine for boring posts 54—barrel for watering high lands 173—machine for mowing 199—pot for covering sea kale 202—Perkins' steam engine 204—construction of an ice closet 252—crank mill 287—tunnel under the river Thames 305—Ingersoll's piggery 24—Mr. Mason's short horn cow 353—garden plough 389.

D.

DAIRY, account of the management of a celebrated one in Flanders 402—premium offered for greatest quantity of butter 33.
——Stock, selling of recommended, and premium offered for 33.
DAVY, Sir H. his opinion of the operation of lime 98
DAVIS, Gideon on the principles of fertility 182—on ploughs and ploughing, tillage, drill husbandry, &c. 9—on ploughing, planting and tillage 1.
DELAPLANE, Joseph on Davis' barsharc and substratum plough 10.
DELAWARE, canal 25—canal from to the the Hudson proposed 43.
DEVON cattle, cost of in England 20.
DISEASES of domestic animals, and their cure 117.
DIETS, rules recommended to be observed in regard to 397.
DIAGRAMS, See CUTS.
DOG, instance of sagacity of 55.
DOGS, on the management of 27, 35—on their diseases and the cure of 69.
——And HORSES, on the management of 93.
DOMB LLE, Mathieu de letter to Sir J Sinclair 53.
DOUGLASS, David, sent by the Horticultural society of London to America 190 notice of his arrival and correspondents of the Farmer requested to further his objects 192.
DRAINING, as practised on Mr. Rowand's estate 54—remarks on, by W. Plumer, Jr. 1 3.
DRESS, anecdotes of in the last century 19.
DRILL Husbandry, remarks on, by G. Davis 9.
DROPSY, in domestic animals 117.
DRY Culture, letter from Dr Screven, of Georgia on the importance and advantages of *the dry culture of rice* 389, 395.
D. W. Jr., on the management of fruit trees 395.
DURHAM, Mr. of L. Island, experiment in raising cotton 27.
DYSENTERY, cure of 7.
——and Summer complaint, relieved by the use of the Bene plant 332—in animals, how to cure 124.

E.

ECLIPSE, the celebrated American race horse, his pedigree and performances 243—the English horse Eclipse, pedigree and account of 243.
——of the sun 53.

ECONOMY, Political, essay on 51.

EDITORIAL ARTICLES AND REMARKS, On the variety of small articles sold from a New England farm 6—on Agricultural schools 6--notice to Subscribers who receive the first number 8---on fine cattle slaughtered by Mr. Elmore, with their weights---receives seed for distribution---war, and its effects on the price of produce 16---on foreign news 24---requests the attention of a Tennessee correspondent, to a particular fact 30---note on Mr Law's communication on burnt sod, and notice of Mr. Oliver's expeditious and economical contrivance for same operation 32---on the premiums offered by the Essex Agricultural society ---impossibility of publishing all lists of premiums ---reflections on the best *forms* of premiums, and offers to procure them---notices superior sheep slaughtered and sold by Mr. Ellicott, and Mr. Curtain, with their weights; and that of a large hog of Mr. Barney's 50—gives account of proceedings of Maryland Ag. Society 48—reasons for occasionally publishing articles on Political economy 51—notices the liberality of C. E. Rowand, Esq. 54—states decisions of Committee of arrangement of Maryland Agricult. society, and describes a great convenience for good housewives 56—notices some fine crops of tobacco 64—remarks on news from Europe 72---notice of proceedings of Allegany county, (Pa.) society 77--remarks on Gen. Swartwout's communications relating to flax—notices, trials of speed 96—gives instances of the extraordinary speed of horses in England 103—notices new, use of sheep 104 wonders that experiments have not removed all doubt about origin of cheat 120—remarks on his publications concerning Internal Improvement 137—on the publications and utility of the New York Board of Agriculture 135—on the general aspect and progress of agriculture in Calvert county 160—ascertains that his subscribers are not satisfied with so much about canals 168--notices, beautiful wheat of T. Tilghman, Esq. 175—cant publish agricultural addresses, *in extento* 183—gives instructions concerning ice and ice houses 184—notices an useful furnace for preserving fruits 192—also, the arrival of Mr. Douglass, Horticultural agent from London, and asks his correspondents to further his views 192—manner of trimming hedges in England 200—notice of Horticultural society of London 207—of meeting of trustees at Hampton 216—of Gardiner Lyceum 224—invites ladies on the E. shore, to send over household manufactures—notices superior white wheat, and fine racing expected 232—meeting of trustees at Col. Bosley's 248—water cart 255—brief notice of Cattle show Nov. 264—calls meeting of the members of the Maryland Ag. society for choice of officers, and remarks on Col. Powel's letters 272—liberality of Gen Van Ransellear 288—seeds received 296—gives names and ages of domestic animals 298—proposes alteration in plan of publication—explains why so much published about canals, and notices appointment of Gen. Van Ransellear as chairman of Agricultural committee in Congress 304—notices the Cattle show at Paoli, Pa. 320—introduces an account of Mr. Ingersoll's Piggery 321—appointed to attend at Annapolis 328—notices a work on cattle medicine 336—various breeds of cattle 337—meeting of trustees at Gen. Harper's, and proceedings 344—his letter to a member of the Legislature of Maryland, soliciting a donation to the Maryland Agricultural society 352—notices a singular species of fish eaters 359—J. C. Bates' Address 368—first meeting of trustees on the E. shore of Maryland Ag. society 376—states principles that guide him in regard to publications for and against manufactures 384—meeting of Trustees of Maryland Ag. society at R. Caton's, and proceedings 400—address to subscribers 408.

EDUCATION, agricultural as necessary as professional 142.

EGGS, how to preserve from putrefaction 208.

ELECTRICITY of a cat 160.

EMPEROR, celebrated hunter horse 8.

ENGRAVINGS, see CUTS.

ENGLAND, its agricultural advantages compared with those of the U. S. 413.

EPILEPSY in Animals, how to cure 126.

EPITAPHS, some curious ones 55.

ERGOT, or spurred rye, bad effects of 4.

ESSEX, Agricult. Society, premiums offered by 33.

EQUESTRIAN performances 301.

EXPERIMENTS, recommended by T. Pickering 98.

EXPORTS, how much of cotton 19—of New York 25—when exceeding imports do not necessarily lead to national distress—how they should be *valued*—of specie not injurious 51.

EXTORTION, levied by manufacturers 17.

F.

F. on the growth and sale of wool 102---on the importation of valuable trees—grains, vegetables—grass seeds--domestic animals, &c. 29.

FALLOW, green, how to improve land by 82.

FARM buildings, on the construction of, by J. H. Powel 270.

FARMING, axioms in 56.

FEATHERSTONHAUGH, G. W. Editorial remarks on his usefulness and services to the cause of agriculture 135—his letter to S. Van Rensellear on the principles and practice of rural economy 137—letter to Gen. Van Rensellear on sheep husbandry 177—his essay on the principles and practice of rural economy 157---letter on sheep husbandry 185.

FENCES, comparison of cost and durability of different kinds, by James Worth 202—dead fences against live ones, comparative view of 213.

FERTILITY, queries on the principles of 175—answers to queries on, by G Davis 182.

FEVERS of the horse, how cured 35.

FISH, a valuable manure, experiments with detailed by B. F Mackall, Esq. 241—when caught in gill nets in Worcester county, devoured by a kind of worm or insect not hitherto known 359.

FLANDERS, agriculture of 410.

FLAX, ranked among forage crops in Tuscany 30—Goodsell's machine for dressing 46—remark on the culture and dressing of by J. Swartwout 90—reports on the culture and treatment of in Holland and Ireland 156- 163-- culture of in Holland, preparation of the soil 164---sowing, pulling, rippling, steeping, drying, breaking and skutching 165---machine for dressing it referred to by the Editor 80
——Dresser, trial of in Pennsylvania 126.
——And Hemp, pamphlet on cultivation and treatment of in Flanders 147—report, &c. 173.
——Seed, on the use of as food for stock 116.
——Or Line, Philip's natural history of 75.

FLEECE, account of a heavy one 112.

FLOUR, proportion of to grain 411.

FLY, Hessian, remarks on by Thomas Becsley 165—ravages of on the E. shore of Md. 72.

FOOD, on adulterations of, by Frederick Accum 196—vegetable and animal, nations live wholly on each 205—of man, great variety of 205—preservation of at sea 301 --of animals 404.

FOOT halt, how to cure 405.

FOREST trees, singular properties of 286.

FORMAN, T. M. thanks of Surry county Ag. society presented to 71.

FRUIT, to preserve without sugar 391.

FRUITS, how to preserve various kinds, *see Receipts.*—account of a variety of fruit trees, sent to the Hon. J. Lowel of Mass. by the President of the London Horticultural society 209.

FRUIT TREES, on the management of, by D. W. Jr. 395—destroyed by rye and oats 30--benefitted by corn and potatoes 30—ringing the bark of experiment in by Joseph Sabine 309.

G.

GARDEN, Botanical one ought to be at Washington 28.
——Plough, cut and explanation of one 389.

GARDINER, Lyceum, address of the Trustees on the objects of the institution 217.

GARLIC, valuable communication on the extirpation of 381—contrivances for separating from small grain 382---use of suggested as a preventative of fall fevers 128—first sowed by the Swedes on the Delaware 28.

GARNETT, J. M., his address to the Fredericksburgh Agricultural society 325.

GELDING heifers, swine, &c. how performed 298.

GEOGRAPHY of plants, remarks on 86.

GIBBS, W. S. remarks on the culture of the grape vine 12 .
——George, valuable observations on various grape vines at Sunswick in New York 241.

GLANDERS in horses, description and how distinguishable from other disorders 308—symptoms described, and cure suggested by Joseph Kersey 333.

GOATS, Cashmere premium of $100 offered for their introduction by the Mass. Ag. society 399.

GOODSELLS's Machine for dressing flax 46—his machine for dressing hemp and flax 91--trial of his flax dresser in Pennsylvania 126.

GOWAN, J. R. describes a well or cistern for holding rain water 86.

G. R. interesting letter from, communicated by J. M. 65.

GRAFTING, remarks on by S. Preston 195.
——And Budding, interesting experiments in 351.

GRAIN, how to preserve from mice 109—experiments in cutting *earlier* than usual 311.

GRAPES, how to preserve from rotting 144.

GRASS Bonnet, statement of Miss Julia Harrison's 279.
——Dub, remarks on by T. Spalding 212.
——Fiorin, how valued by J. Buel 316.
—— and Garden seed, how best imputed 29.
——Guinea, experiments with and results 59—remarks on, by R. Lowry 212.
—— Meadow or perpetual rye grass 183.
——Perpetual rye, some ordered from England 189.

GRASSES, valuable communication from J. Buel, on 289, 297—remarks on various kinds of, by John Welles 134.

GRAVEL, cure for 88.

GRIFFITH, Thos. W. on the plantation of timber 141.

GRIPES, or cholic in horses, how cured 38.

GUINEA Corn 47.

G. W. on plaster and slacked ashes 46.

GYPSUM, acts as a stimulus 59--remarks on the use of 59.

H.

HAINES, Reuben, on the selection of dairy cows 69

HALE, Benjamin, Principal of the Gardiner Lyceum, his address 225.

HAMILTON on the Tariff 284—on domestic manufactures 292.

HAMS cured by pyroligneous acid 367.

HARDEMAN, John, on the extraordinary productions of the west 5—on the "rubbing disorder" in cattle in the State of Missouri 387.

HARDIN, Mark, on the emasculation of squirrels 318

HARRICOTS or French beans 30.

HARRIS, T. sends samples of immense carrots and mangel wurtzel, with letter on the culture of 295

HARRISON, C. on budding 383.
—James C. challenges Eclipse 128.

HAR , Nathaniel, on the culture of hemp 53.

HASLAM, John, on botts in horses 03.

HAY, expeditious method of moving 46.

HEAD-ACHES and appoplexy, probable causes of 88

HEDGES, the crab tree recommended for by Robert Barnard 189--live ones not suited to our country 243.

HEDGING, remarks on by Caleb Kirk 171, 179.

HELME, Dr. R H. extracts from his address 201.
HEMP, on the culture of 53—importation of from Russia into the U. S. in 1821, 53—natural history of by Philips 83--remarks of S. Swartwout on the culture and dressing of 90—proper soil, seed, harvesting, wretting and dressing 99.
——And Flax, how cultivated and treated in Flanders 147—report 170.
HEREFORD cattle, challenge to show against short horns 200.
—— And short horns compared 414.
HEROD, Thomas, on the best method of storing mangel wurtzel 358.
HESSIAN Fly 113—remarks on by "a Virginian" 123—do. by a Farmer of Buck's county 134—do. by S. 139—do. by "a Farmer" 139—do. by a Subscriber 140—do. by J. H Cocke 241.
HINDE, T. S. on the cotton of Illinois 79.
HOG, large one slaughtered 40.
HOGS, (see Swine, and Piggery.) Scorching off the hair recommended in lieu of scalding 337.
HOLLOW HORN, the disease and its cure 124.
HONEY, how secured 45—how to take 72—remarks on saving of 102.
HOOPING Cough, cure for 112.
HOP Beer, how to make 71.
HOPS, on the culture of 10, 114—further remarks on the culture and management of by Israel Thorndike 172—on the culture of by W. Blanchard 210.
HORSE, how to know his age 250.
——Power, what it is, and the application of 365—what does it mean, and what the best mode of applying it 342.
HORSES, the celebrated hunter Emperor 8—on the management of 27, 35, 50—various diseases of and how cured 37, 38—how to know a good eye or a bad one 50—worms in the stomach 50—wounds on the skin of how cured 50—how to distinguish between two sorts of cholic or gripes 50—how to judge the best colt 50—cure for sore backs 50—when not to be curried 50—not to be littered in day time 50—lotion for blows and bruises of 50—speed of celebrated ones 103—on the salivation of 159, 214—remarks on by Albion to his son 152—remarks on the choice of by Albion 180—on the expense of keeping them 181 --*of the genuine racing blood*, their high value maintained and importance of attending to *inculcated by Philip* 213—on the bots in 214—association to improve the breed of in Maryland 222—on the appellatives, qualities, habits and defects of 265, 341, 345, 355, 365, 372—ointment and medicine recommended for 279—on the glanders in 308—forces of working ones and manner of feeding of in Flanders 402.
——And Cattle, remarks on certain diseases of 359—
——And Cows, how fed in different districts of Flanders 410.
—— And Dogs, on the management of 93.
——And Sheep, comparative view of expense of raising 298.
HORTICULTURE, on a succession of garden crops 347
HORTICULTURAL Society of New-York, notice of meeting of 55.
HOUSEWIVES, great convenience for 56.
H. T. on the price of Devon cattle 20.
HUDSON, canal from to the Delaware proposed 43
HUGHES, John, recommends a route for canal from Potowmac to Baltimore 81.
HYDRAULICKS, on procuring water by boring 162
HYDROPHOBIA, strange case of in sheep 5.
——Singular effect of 349—remedy for 350—instances of with symptoms 375.

I.

ICE, oak leaves recommended as covering for 286.
——and Ice Houses, on the use and construction of 184 remarks on by Cræsina 242.
——And Ice houses, valuable remarks of P. E. T. construction of Ice Houses, and the storing of ice 332--on the construction of 189—with closets attached, described by cuts 252.
IMPORTS, may exceed exports consistently with individual and national prosperity 51.
IMPORTATIONS, ruinous in amount 18.
IMPROVEMENTS, Internal, in New York, New Jersey, Pennsylvania, Delaware and Maryland proposed 43—tunnel across the Thames 305.
INDIAN Corn, in Tuscany 30--account of large crop, and its culture 317.
INDUSTRY, Domestic, protected every where except in Holland and America 18.
INFIRMARY, Clinical, plan of one established in Baltimore 176
INGERSOL, Nathaniel account of his Piggery 321.
INVENTIONS, sailing carriages 55.
IRRIGATOR, cut of one for watering high lands, communicated by C. E. Rowand 173.
IRRIGATION, remarks on by Albion 12.

J.

JAMES, John, President of the Agricultural society of Williamsburgh, N. C. his address published at the request of the society 49.
—— Edward sends tobacco seed from the Missouri 167.
J. D. C. on the power of men and horses, the meaning of, and how best ascertained and applied 357--on the meaning and application of horse power 365.
JEFFERSON, Thomas, letter to Major Adlum on his wines 63.
J. M. communicates an interesting letter for publication on the agriculture of Spain and Portugal 65.
JOHNSON, W. R. challenges Eclipse—challenge declined 127.
JONES, Calvin, on the native fertility of the western lands 315.
——R. J. recommends an economical paint for houses 335.

K.

KALE, Sea, on the culture of 202.
KENWORTHY, William, on canals 62, 73, 81, 89, 105, 113, 122, 129, 145, 153, 181.
KERCHEVAL, Dr. describes an extraordinary disorder in the cattle of Kentucky 357.
KERSEY, Joseph, describes the symptoms of, and prescribes a cure for glanders in horses 333.
KINLOCK. Cleland, on the rot in cotton 23.
KIP, Henry, on the culture and dressing of hemp 100
KIRK, Caleb, on hedging 171, 179--relates several instances of hydrophobia, with symptoms and effects 375.
KNIGHT, T. A. letter from to the Hon. J. Lowel on various interesting topicks 383.

L.

LABOUR, daily, of negroes estimated 319.
LADIES, news for 52.
LAMB, account of a singular biped one 102.
LANDRUM, Abner, on grafting and budding 351.
LAW, Thomas, on burning sod 29, 45.
LEAF, on the phenomena of the fall of 308.
LETTERS, an interesting one from G. R. 65.
LIFE, probable duration of at different ages 411.
LIGHT from oil more economical than candles 343.
LIME, definition of and remarks on its application 59—opinion of Sir H. Davy on its operation quoted 97—do. of Agricola quoted and preferred by T. Pickering 97—remarks on the use and application of by T. Pickering 97.
——Or calcareous earth, remarks on in connexion with soils 380.
LINCOLN, Levi, recommends ruta baga highly 39.
LITHOGRAPHY, or stone engraving, how executed 224
LIVINGSTON, Robert R. on the comparative agricultural advantages and disadvantages of England and the United States 413.
LOCUST Trees, how to procure a nursery of young ones 15—natural history of 374—remarks on the raising of 396.
LONGEVITY, cases of 95.
LOWELL, J. on the culture of sea kale 133—account of fruits received from Mr. Knight, President of the Horticultural Society of London 209—communicates an interesting letter from T. A. Knight, Esq. President of the Horticultural Society 383.
LOWRY, R. remarks on Guinea grass 212.
LUCERNE, remarks on the culture of 214.
L. W. sends water melon seed 30.

M.

MACAULY, Dr. P. on the supposed emasculation of squirrels 317
MACHINES, Pope's for threshing 21--one for dressing flax 46—one for dressing flax, adverted to by the Editor 80—representation of one for dressing hemp and flax 91.
MACHINE for boring posts, drawing and description of 54—cut of one for mowing 199.
MACHINERY, how best moved by horse power 342.
MACKALL, B. F. details experiments with fish as a manure 241.
MADISON, James, letter to Major Adlum on his wines 64.
MAGNESIA, as connected with soils 381.
MAGNOLIA Grandiflora, natural history of 404.
MOGOTHY Bay Bean, paper on the value and use of 333.
MANGE, cure of in dogs 69.
MANGEL WURTZEL, extraordinary produce of 14—on feeding of to sheep 174—on the culture and keeping of 181—on feeding with 209—very large ones, with letter on the culture of, by T. Harris 295—on storing of 358--great crop of made by J. H. Powel 409.
MAN Power, how best ascertained and comparison of with that of horses 357.
MANUFACTURES, American, memorial in behalf of 17—at Patterson, account of 48--encouragement of 228—on the policy of encouraging 245 Hamilton on the policy of encouraging 284, 292.
——Domestic how far to be encouraged by government 262—Ruris Consultus against further encouragement of 369---Ruris Consultus against further protection of 377—Ruris Consultus 393—Memorial of Agriculturists of Pennsylvania, in favor of further protection of 399—ought to be encouraged 406.
MANUFACTURERS, Board of Pennsylvania society, their memorial 17.
MANUFACTORY at Steubenville, account of 302.
MANURE, remarks on the application of 200—salt recommended 259.
MANURES, soap ashes when and how to be used 41—remarks on the nature and application of, by the Editor of the Emporium of Arts and Sciences 57—remarks on the accumulation and use of, by T. Pickering 99—remarks on by W. Plumer, Jr. 194
——Of the stable, on the application of 219.
MANURING, how to calculate distribution of 53.
MARLE, on the effects and value of in Maryland 387.
MARSH LAND, letter on the reclamation of by C. E. Rowand 92.
MARTEN, Samuel, deprecates war 47—communicates a singular cure far the botts 203.
MEAD, Cowles, his trials of lupens, &c. various grasses in Miss. 167.
MEAT, how best preserved in warm weather 410.
MELON, Water, superior kind 30.
MEMORIAL, from board of Manufacturers of the Pennsylvania society 17.
MERCHANTS, amply protected by Congress 17—their honesty asserted 19—ought to instruct their captains to bring seeds, plants, &c. 28.
MICE, to preserve grain from 109.
MIDDLETON, J. letter respecting his Tuscany cattle 367.
MIGRATION of Birds, interesting explanation of 340.
——Periodical of Birds, explained 348.
MILDEWED Wheat 229.
MILL, Tread, improved one 15.
MILLET, how to manage 24—answers to enquiries about, by Corwen 270.
MILLS, Robert on the junction canals 161, 169.

MITCHEL, Henry, sale of his pippins in England 47.
MONOPOLY, dangers of by Manufacturers 18.
MOROCCO, on the manufacture of 279.
MUSE, Joseph E. on the Hessian fly 114—on the culture of rice, and the reclamation of marsh lands in Maryland 220.

N.

NATURAL HISTORY—changes in the colour of the clothing of animals 261, 267—emasculation of the squirrel only apparent and accounted for 317, 318, 350—periodical migration explained 348, 340, 354—of the acacia or locust tree 374—torpidity of animals 388—food of animals 404.
NEWELL, J. R. describes and recommends wool and cotton spinner 47.
NEW-YORK, its exports in four different years 25—her tonnage at different periods 25—owns botanical garden 28—Board of Agriculture, editorial remarks on its publications 135.
NORTH Devon, on the management of calves 172.
NURSERY, how to make one of locusts 15.

O.

OAKS, on the raising of from the acorn 141.
OIL of pumpkin seed 13—extracted from cotton seed 245—cheaper than candles proved by experiment 343.
OLIVER, R. Esq. his kiln for sod burning 32.
OLIVES, American, specimen of received from Georgia 223.
ONIONS, ground suitable for 5—selection of seed of 5.
OPIUM, some remarks on the culture of 96, 182.
ORCHARDS, on the planting and cultivation of 403
ORCHARD GRASS, remarks on by J. H. Powel 270 —do. on the properties and value of 402.
ORNITHOLOGY, specimens of presented by J. Hume to a society in Charleston 71.
OWINGS, Nimrod, on the botts in horses 214.
OXEN, best form and premium offered for 35.
OYSTERS, medical qualities of in consumptions and fevers 391.

P.

PABULUM of plants, in what does it consist? 58.
PAINT, a cheap species of recommended 335.
PARING and burning, view of, at Mr. Oliver's farm 32
PARKIN, W. on the culture and use of rape 395.
PATERSON, Manufactories at, account of 48.
PEA, Angola 15.
PEAS, on the culture of 15, 84—different kinds sent to the editor 71.
—— Georgia or tory peas recommended by a North Carolina correspondent in lieu of clover, and as excellent food for hogs 39.
PEACHES, notice of peculiar Chinese ones 182.
PEACH Trees, on the calamities to which they are subject 118—enquiries respecting 173.
PEARS, 150 varieties in the nurseries of Paris only esteemed good 28.
PEDESTRIANISM, extraordinary case of 8.
PEDIGREE of J. H. Powel's stock 390.
PERKINS' Steam Engine, notice of 118—cut and description of 204.
PETERS, Richard, on the diseases of peach trees 118 —on fatting swine 372.
PHILADELPHIA, her exports in 1793, 1800, 1818 and 1820, 25.
PHILO RUSTICUS on draining inland swamps 109, 147
PHILIP on the great value and superiority of THE GENUINE BLOOD HORSE 213.
PHILIPS' natural history of hemp 83—of flax 75.
PICKERING, T. recommends a brush to destroy caterpillars 85—his address to Mass. Ag. So. at Brighton 97, 106—his remarks on live stock 106 —on the importance of ice houses, or good spring houses, as connected with the making of butter 106—on the excessive use of spirituous liquors 106—on the importance of good cider as a substitute for spirit 106—on turning in green crops 107—on the importance of fallowing 107—on the importance of agricultural exhibitions 107—on ploughing 107.
PICKLES, how to reclaim when frozen 72, 112.
PIGEON, Passenger, or Columba Migratoria, history of by Governor Clinton 198.
PIGGERY, account of Mr. Ingersoll's 321.
PINKNEY, Thomas, on the water culture of rice 47
PIPPINS, Long Island, great produce and sale of in England 47.
PLAIN SENSE on cheat 82.
PLANTS endowed with life 57—the life of compared with that of animals 57—on the naturalization of in different climates 58—on the pabulum of 58—geography of 86—on their powers of motion, by W. Zollikoffer 87—remarks on the food and component parts of by T. Pickering 97.
PLANTING of timber recommended 28.
PLASTER, on the use of with slacked ashes 46.
——Of Paris, Mr. Coke's experience of on the sea coast 65.
PLOUGH, Garden, recommended 318—cut of one 389
PLOUGHING, deep or shallow, when useful and when not 2, 9—premium offered for 34—remarks on 142.
PLOUGHS, barshare, substratum and shovel, engraving of and remarks on 1—premium offered for 34—on those in use in South Carolina by Capt. James 49.
PLUMER, W. Jr. interesting extracts from his address 193
POETRY, parody on Moore's song of the woodpecker 8—on rural peace and independence 24—lines to Thomas Moore on the birth of his daughter 224—Jonathan's account of the cattle show 255—to a country girl 264—on the destruction of some and preservation of other animals 296—Truth and Young Romance 304—a mother's love 312—Jonathan's visit to the steam boat 320 Jonathan's visit to the cotton factories 360—little pet plant 407.
POINSETT, J. R. letter to the Ag. So. of South Carolina on the importation of foreign plants, trees, &c. 188.
PONDS, on the construction of, to gather water for cattle 142—how constructed 146, 154.
POPE'S threshing machine 21—Joseph Pope, Jr. remarks on 227—Dr. M'Culloh's letter in relation to 351.
PORCELAIN, American, manufactured in New-York 7.
PORTER, Com. David. appointed one of the judges at the cattle show Nov. 1823 256 letter relating to the trial of preserved meats 302.
POSTBOY, Gen. Ridgely's celebrated racer, his performances 223.
POSTS, cut and machine for boring 54.
POTATOES, best ground for 5—premium offered for 34—quality of how improved 34—how to preserve 174 recipe for boiling 415.
——Sweet, on the culture of by Capt. James 49.
POTTER, John tells how to keep meat free from fly or bug 144.
POULTRY best not scalded 7.
POWEL, Col. J. H. opinion of Pope's threshing machine 22—communicates the result of an experiment with Goodsell's flax dresser 126—on farm buildings, feeding and management of cattle, position and construction of farm buildings, &c. 270—letter concerning Mr Champion's short horn stock and other remarks on the qualities of that race in general 394 pedigree of his stock 396. —makes a large crop of mangel wurtzel, describes the soil, culture, expense, &c., and exhibits cream from cows fed on, with remarks on the value of it and other vegetables 409.
PREMIUMS offered by Agricultural Society of Essex 33 list of offered by Maryland Ag So. 70—distributed by Allegany County Penn. So. 77—granted by Albany County Ag. So. 84 offered by the Society of the Valley 84—offered by the Pennsylvania Ag. So. 130—offered by S. Carolina Ag. So 227 evidence to be given by those claiming premiums at the cattle show in Maryland, in Nov. 240—awarded by the Pennsylvania Ag. So. 313—awarded by the Ag. So. of the Valley 345 awarded by Fredericksburgh Ag. So. 370—awarded by Ag. So. of Barnwell Dist. S. C. 401—offered by do. 414.
PRESERVES, how to preserve various fruits. (See Recipes.)
PRESS, Hydrostatic, erected in Gardiner, Maine, described 183.
PRESTON, S. on grafting apple and other trees 195
PRINCE Regent, horse so called advertised 48.
PRINTING, remarkable illustration of progress of 245
PRODUCTIONS, extraordinary, cotton 4—timber 4, 5,—asparagus 5—hemp 5—palma christi 5—mustard 5—radishes 5—cymlins 5—squashes 5—melons 5—artichokes 5—bullocks 5—grapes 5—honey 5—ruta baga, mangel wurtzel, table beet, carrots 14.
PUDDINGS, receipts for various kinds 215.
PUMPKIN seed oil, on the manufacture and use of —eating the seed of injures animals, by promoting too great a flow of urine 13.
PUTNAM, Col. management and produce of his farm 77.

Q.

QUININE, sulphate of, much used and little known 387

R.

R. on Cheat 114—calls on Dr. S. Black for a statement of the effects of his system of improvement 359.
RACES, the great match race for $20,000 54—account of the great one in New York 96—in Virginia, fall of 1823, 222—at Petersburgh in Oct. 1823 244—at Canton and Washington 256—with dogs, account of 288.
RACING, performances of Flying Childers 127.
RAIN Water, how preserved in cisterns 85, 86.
RAPE, culture of recommended by Agricola 376—on the culture of by W. Parkin 395.
RARITAN, Canal 7.
RECIPES, to make chichory or Germanic coffee 4—to cure Dysentery 7 how to prepare poultry for the cook 7 to produce a yellow rose without a thorn 24—to destroy the Bee Miller 45—to know if a horse has a good eye 50—to cure sore back of horses 50—to cure bruises and blows 50—how to cure wounds in the skin of horses 51—how to cure gripes in horses 51—to prevent mouldiness 70—to make hop beer 70—to take honey 72—to reclaim frozen pickles 72—to cure the Gravel 88—to preserve wood 102—to reclaim frozen picles 112—for Hooping cough 112—to make yeast 127—to preserve fruit and flowers the whole year 135—to keep meat free from fly or bug 144—to prevent moulding of books, ink, paste and leather 144—to prevent grapes from rotting 144—to cure beef, and keep it sweet 166 —to make celery sauce 192—to make calf's head soup 192—to make pea soup 192—Mrs. G's. famous bunns 192—black cake 192—to preserve gooseberries and various other fruits 197—to make nice sponge cake 207—to preserve eggs from putrefaction 208—to preserve grapes 208—for cakes, Cocoa nut puddings, pumpkin puddin, potatoe pudding, orange pudding, almond pudding, and Tomato catsup 215—for making blacking for shoes, Japan blacking, French varnish for furniture, for oil paintings 224—to prevent cramp 245—purging powder for pigs 254—to cure the dog mange 254—to make horse ointment very useful 279—to make horse medicine 279—to cure tooth ache 279—to make a pickle for beef and pork 303—oil cheaper than candles, proved by experiment 343—to cure tooth ache 343—to preserve fruit without sugar—to make apple jelly—to make tomatoe catsup—to make mutton hams—ginger wine—currant wine—bookbinder's paste 391—to make yeast 398—to make opedildoc—to clear iron from rust—to take mildew out of linen—to make toast water 398—to preserve fruit fresh all the year 399—for poison-

ing rats 405---to make catnip poultice 407---for a common cold 407---for boiling potatoes 415---to kill cockroaches 414---how to destroy vermin on cattle---to make varnish for boots and shoes 278---to clean silk, woolen and cotton 208---to prevent wood blocks from warping 215.
REDDING, W. F. sends a communication on the water culture of rice 35---his letter from Mr. Rowand 54.
REFRIGERATOR, Richardson's, a great convenience for Housewives 56.
REPORT of Tobacco, inspected at lower Marlbro' quarter ending April 1, 1823 54.
REPORTS, Agricultural, from Frederick county Va. 54---Poolsville, Md. 54.
REVENUE destroyed by high tariff, denied 19.
RICE, on the water culture of 35---on the cultivation of in Maryland 27 ---seed of a hardy kind, received from Gov. Clinton 212.
RIDGELY, Capt. C. G. Minerals and other curiosities presented by, to the University 13.
RIGBY, Dr. kindness to an American traveller 65.
RINGING the bark of fruit trees, experiments in 310.
RINGOLD, Gen. S. his use of his sheep to destroy the fly in wheat 104.
——James, his description of machine for boring posts 54
R. K. M. his enquiries about strawberries 46.
ROADS and Canals, report on by J. C. Calhoun 281.
ROBERTSON, Thos. B. against Uusury laws 160.
ROT in Cotton, remarks on by Dr. Bracey 12, 25---report on to the Ag. Society of Claremont 23.
——in Sheep, cure for 255.
ROTHSCHILD, N. M. Memoirs of 229.
ROW, John on the speed of celebrated horses 103.
ROWAND, C. E. his experiments in draining marsh land---his hedges---his hospitality, his character as a planter 54—letter on the means of reclaiming marsh land 92---explains a paragraph in a communieation published in No. 12 135---on watering highlands 173.
RURIS Consultus against farther encouragement of domestic manufactures 329, 371, 377, 3 3.
RUS-IN-ARBE, recommends scorching off the hair of hogs, in lieu of scalding to clean 357.
RUSTICUS, on the clearing and culture of inland swamps in S. Carolina 101---on draining inland swamps 165.
RUTA BAGA, profitableness of doubted 39---on the culture and value of 101.
RYE, spurred or Ergot, bad effects of 4---coffee bad effects of 4.
——Grass, Etymology of 175.

S.

S. on the Hessian fly 139.
SADLER, Clement, Esq. imports large sheep into New-York 72.
large ones imported into N. York by C. Sadler 72
SALIVATION of horses, remarks on 214.
SALT, experiments with as a manure 249, 259, 168, 281, 290.
SAND or silex as connected with soils, defined 380.
SASSAFRAS tea recommended for dyspepsia 160.
S. B. on the smut 140.
S. B. D. on certain diseases of horses and cattle 359
SCHOOLS ,Agricultural, 6---remarks on the importance of 56.
SCREVEN, Dr. J. P. interesting letter on the advantages of *dry culture* 379, 385.
SEABROOK, W. B. on crab or crop grass 295.
SEA KALE, on the culture of by J. Lowell 133—and C. S. on the culture of 202.
SEED of pumpkin, oil of 13.
——Received by the editor for distribution---peas, Guinea corn, snap bean, millet, various tobacco seed, waugh-paugh-cometta corn 16.
——Sent for diatribution-- musk melon, water melon, early golden corn 32.
SEED , valuable hints on the preservation and sowing of by J. B. 394.
SENEX on the emasculation of squirrels 318.
SEYMOUR, Abel, on the salivation of horses 159.
SHEEP, case of hydrophobia among and strange effects of 5---particular kinds wanted and ought to be imported 28---a breed extraordinary for size introduced in the neighbourhood of Albany 72---on the management of 172---remarks on breeding of 222—number of and of cattle killed in the Smithfield market, from 1789 to 1824, and average price of wheat 3 8.
——Bakewell, fine ones in Baltimore market 40.
——Husbandry, letter on to S. Van Rensellear by G. W. Featherstonhaugh 177---letter on from G. W. Featherstonhaugh 185.
——Merino, on the value and improvement of 334.
——Power, new use and application of 104.
——Skins, how converted into leather 279.
——And horses, comparative view of expense of raising 298.
SHOW, Cattle, and Fair No. 4, of Maryland Ag. So. 70
SINCLAIR, Sir John, deserved tribute to 53.
SMITH, Dr, James, on the uses of the bene plant in cases of dysentery and summer complaint 331.
——J. F. highly secommends the cultivation of bene for its oil and other uses—remarks on the palma christi 388.
SMUGGLING, danger of from increase of duties denied 19.
SMUT, how to prevent 140.
SMYTHIES, J. R. his challenge to show Herefords against Short horns 200.
SNAKES, fascinating power of 389.
SOCIETY, Agricultural, (See Agricultural Societies)
——Horticultural, of London, brief notice of, supposed by Gov. Clinton 209.
SOD Burning, 45---remarks on by Mr. T. Law 29---Mr. Oliver's kiln for 32.
SOIL, on that of S. Carolina by Capt. James 49---description of different kinds 58---remarks on the nature and constitution of by T. Pickering 97.
SOILS, description of the various kinds of 380.
SOILING of dairy stock, how best done 33.
SOUR KROUT, exportation of 53.
SPALDING, T. on dub grass 212.
SPAYING heifers, swine, &c. how performed 298.
SPEED, trials of in New-York 96—that of Flying Childers stated 127.
SPENC , J. S. some remarks from on millet, and on a worm or insect which destroys fish in the gill nets 359.
SQUIRRELS often emasculated, quere, how? 213—apparent emasculation of 350.
STEAM ENGINE, cut of Perkins' new one, and description 204.
STEVENS, J. C. delines the challenge of Eclipse 127
STOKES, J. A on wheels 88.
STRAWBERRIES, information wanted 46—on the culture of 64, 72, 318—queries as to the culture of 159 –on the culture of by Jas. Worth 190.
SUBSCRIBER remarks on the botts in horses 166.
SULPHATE of Quinine, much talked of, much used, and little known 387.
SUMAC, premium offered for 34
SUPERFŒTATION, the theory of considered 349.
S. V. S. on the origin of cheat 22, 132---on the use of charcoal as a cathartic 316.
SWAMPS, Inland, on the importance of draining and cullivating those in S. Carolina 108, 163 – on the clearing and culture of in S. Carolina 100 on the importance of draining them and how done 147.
SWARTWOUT, S. his letter to W. M. Barton, on a flax dressing machine 46—on the culture and dressing of hemp and flax 90.
SWEET SPRINGS, on the use of the waters of 152.
SWINE, remarks on the fatting of by Judge Peters 372

T.

(Except tobacco reports.)

TANNING, by decoction of bark described 279---of sheep skins 279---improved method of 303---extracts from English statutes regulating 312.
——and Tannin, principles of explained 330.
TEA, how cultivated 392.
——Hyson successfully cultivated in N. Carolina 88.
——Plant, on the culture of 166.
TEETH of domestic animals, when shed 315.
THISTLE, Canada, how destroyed 60.
THORNDIKE, Israel the culture of hops 114---on the culture and management of hops 173.
TILGHMAN, Tench esq. great perfection of his wheat 176.
TILLAGE, how best conducted 1, 2---remarks on by W. Plumer Jr 193.
TILTON, Dr on peach trees 118.
TIMBER, on the plantation of by T. W. Griffith 141 ---facts relative to felling it 406.
——Land, for national use ought to be the property of the nation 28.
TOBACCO, Medical effects of 38---growth of in 1821, exports of 1822.
TONNAGE of New York, at different periods 25---of Baltimore, do. 25---of Philadelphia, do. 25.
TOOTH-ACHE, cure for 279---how relieved 343.
TORPIDITY of Animals, explained 388.
TRADE, will regulate itself; pernicious tendency of the doctrine 17---balance of, what it means 51---on the balance of 62, 68.
TRAINIG of Men, how done in England 219.
TREAD Mill, improved one 15.
TREES, great ages of some, and how ascertained 311 ---antiquity of 327.
——Forest many yet wanted 28---premium offered for 34.
——Plants, and Shrubs, how to pack for importation 29.
TRUSTEES of Maryland Agricultural Society, meeting of at Hampton 222---they appoint Judges for the Cattle show 222---remarks on their duties 222 ---meeting, Gen. Harper's and proceedings 344---notice of meeting at Mr. Caton's 400.
TUNNEL across the Thames 305.
TURF, sports of at Long Island 53.
TURNER, H. S on the prospects of Agriculture in May 23, 79---agricultural report of 144.
TURNIPS, seed of various valuable kinds imported by Robert Barnard 189---on the culture of, and where practicable to advantage 375.
TUSCANY, agriculture of 29.

U.

UNIVERSITY of Virginia, prospects of 23.
UNIVERSITY of Maryland, account of commencement at 46.
URINE, remarks on the use of as manure, by T. Pickering 99.
USURY Laws, remarks on by Gov. Robertson 109.

V.

VEGETABLE Food, instances of nations living wholly on 205.
VEGETABLES, on the pabulum of 58---on their self-moving power 87.
VEGETATION, on the principles of 57.
VERMIN on Cattle, how to destroy 30.
VESTIS, on the culture of the vine 6.
VINE, on the cultivation of 6---making wine 6.
VINES, some remarks on the culture of 96---on the culture of, by W. S. Gibbs 124---observations on various kinds made at Sunswick N. York, Col G. Gibbs 241.
VINEYARD, Major Adlum's extent of 94---origin and successful progress of one in Pennsylvania 251.

W.

WADSWORTH, James, interesting letter from against root culture and premiums for cattle, on the comparative profits of manufacturing and farming 356
WASHINGTON, L. A. on forming a nursery of young locusts 16.

WATER ponds of for use of cattle, how constructed
——On procuring a supply of by boring, with a description of the implements to be used 142, 146, 154. 162.
——Cart, most eligible form of one described and recommended, for distributing salt water as a manure 2[illegible]2.
WATERING highlands with muddy salt water 173.
WELLS, John, on various kinds of grasses 131.
WESTERN, C. C. on merino sheep, value and improvement of 334
WHEAT, seed of best from the north 28—old recommended as preferable for seed 108.
——Eastern Shore white, great perfection to which this valuable grain has been brought and preserved by Tench Tilghman, Esq. of Talbot Co. E. S. of Maryland 176.
——Average price of in the Smithfield English market from 1789 to 1824, 358.
WHEELS for carriages, on the best construction of 87—on the principles of their construction and motion 182--iron ones recommended 393.
WILLIAMSBURGH, Agricultural Society sends address of Capt. James for publication 49.
WILSON, John, great walker 8.
WINE, domestic, on the making of 6—present of various kinds from Major Adlum 63----remarks by do. 134.
WINE, various kinds described, and their uses 271.
WOOL, on the sale of 102—account of a heavy fleece of 112---explanations respecting the same 213---prices of 114.
——And cotton spinner, enquiry about answered 47.
WORTH, James, on the culture of strawberries 190---on the comparative economy of different kinds of fences 202.
WRIGHT, Thomas, his queries on the principles of fertility 175.

Y.

YEAST for bread, how to make 127, 398.

Z.

ZOLLIKOFFER, W. on the power of self motion in plants 87.

NOTICE TO SUBSCRIBERS.

Those who continue their subscription to the Farmer, are respectfully reminded that the *best proof* they can give of their approbation of our labours, will be a prompt compliance with the stipulated terms of subscription, which will remain, as heretofore, to wit:

To those who take the risk of all casualties, $4 per annum, payable *in advance*—but those who prefer, as we hope most of them will, to pay $5 in advance, will be entitled to have each paper supplied, which may happen from any cause, *not to reach them in good order*, and an agricultural almanack, in the bargain. The almanack, besides the contents of common almanacks, will have recipes, short essays, &c. connected with the farmer's and the *housewife's* duties and business. Those who prefer the payment of four dollars, are assured that the Farmer is *regularly put up* and sent off in *at least as good condition*, and with as much security for its safe arrival, as any paper in the United States, excepting always that invaluable work, Niles' Weekly Register.

☞ The money, whether four or five dollars, to be remitted, in all cases, directly BY MAIL, at the Editor's risk—he, requiring only the word of the subscriber that the money was deposited in the neighbouring post office. ☞ The difficulty arising from the impracticability of getting $4 notes, in many places, may be obviated in this way.—Let the subscriber send a $5 note, with a request that the odd dollar be passed to his credit for three months of the succeeding year, and it will be done: but where $5 are received, without any such *wish expressed* by the subscriber, it will be taken for granted, that his desire is to be considered as a *guaranteed* subscriber, and entitled to an Agricultural Almanack, and he will be so entered on the books. ☞ Lastly, the Editor assures his friends, that from the variety and value of materials on hand, the regularity of his supply from abroad, of such publications as afford matter adapted to this journal, and above all, from the number, zeal, intelligence and generous publick spirit of his correspondents in all the states of our own blessed country, with her infinitely diversified soil and climate, and unexplored resources of Agriculture and Natural History, he can promise, *without fear of failure*, that the Farmer will continue to be at least as *well worthy* of their patronage as heretofore; to say nothing of *improvements* in the plan and substance of the work, which ought to be expected from greater experience and facilities, and undiminished fondness for the subject.

The most inattentive observer, must have perceived the progress of publick opinion, within the last few years, in attaching more respectability, and a higher moral consideration to the business and character of the Farmer, embellished as it now is, with researches and acquirements in Natural History, Botany, and other liberal studies, and guided by the results of modern discoveries, in phisiology, chemistry, &c. No longer is the practice of agriculture, associated with the idea of mere *brute force*, and all its results, considered as ending solely in calculations of profit and loss. Its votaries are expected to combine the polish and the pleasures of reading, with *better judgment*, in directing the labours of the field—and hence it is, that we witness the just pride, which is now felt, in selecting the cultivation of the soil, in all its alluring varieties, as their regular profession, by young men of the first consideration and talents: and how much more useful and honorable to seek, where " all the grateful country breathes delight," the invigorating toils of the field, and the never tiring studies of nature, renouncing the unmanly and enervating pleasures and pursuits of the town, of which, if ever, it may now be truly said

> " Where news and politicks divide mankind,
> " And schemes of state involve th' uneasy mind,
> " Faction embroils the world; and every tongue
> " Is mov'd by flattery, or with scandal hung:
> " Each rival Machiavel with envy burns,
> " And honesty forsakes them all by turns;
> " While calumny upon each party's thrown,
> " Which both promote, and both alike disown."

It is from reflections like these, and not from the vanity, which is the growth of overweening partiality, for our own offspring, that we anticipate the time, when every tiller of the soil will patronise the " AMERICAN FARMER." To the intelligence and the liberality of our correspondents, we owe unspeakable gratitude, for enabling us to say with confidence to *every farmer*, that in its pages, his wife may find the most valuable recipes, and instructions in every branch of household industry—that his children may find in them, amusement and edification, and that to himself, they will furnish the results of experiments and practical directions, applicable to the whole circle of agricultural operations—finally, we ask the favour of all those, who think its usefulness not overrated, not only to consider themselves as agents to receive subscriptions, but that the Editor will feel himself under particular obligations to *all* those, who by sending him a *single* subscriber, so far enable him to continue, the *first American Journal*, devoted exclusively to the instruction and benefit of the agriculturists of America To promote their interests, to defend their rights, to deserve *their* esteem, and to exalt and embellish their vocation in the estimation of themselves, and of mankind, is the greatest pride, and the highest ambition of their humble servant,

J. S. SKINNER, EDITOR.

Baltimore, *March* 19, 1824.

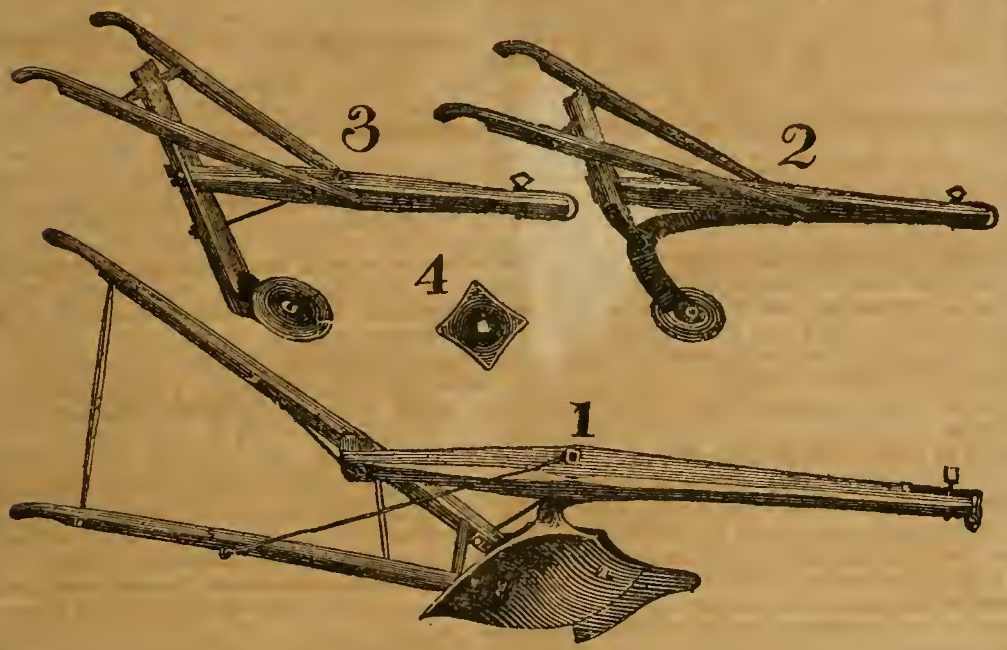
AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICE CURRENT.

" *O fortunatos nimium sua si bona norint*
" *Agricolas.*" . . . . . Virg.

Vol. V. BALTIMORE, FRIDAY, MARCH 28, 1823. No. 1.

IMPROVEMENTS IN THE BARSHARE, SUBSTRATUM, AND SHOVEL PLOUGHS; AND MANNER OF USING THEM EXPLAINED.



Remarks on Ploughing, Planting, and Tillage; with some observations on the Drill Husbandry.
Prepared by Gideon Davis, *Manufacturer, Georgetown, D. C. for the "American Farmer."*

The present time is one of much inquiry, research and practical experiment, in Agricultural and Manufacturing affairs, which forebodes vast results. We are told, that in the Eastern, as well as this Western World, many men of the highest attainments and greatest refinement, are not only turning their attention to the promotion of Agriculture, Manufacturing, and Internal Improvements; but are endeavouring to adapt their habits to a rural life; with a view, to systematise the art of husbandry, and render it more pleasant, profitable, and honourable.—Hence it is, that science having united her powers to effect the plan—research must go its faithful rounds, and explore every part. With the knowledge of chemistry, much has been explained already; and by the knowledge of Arts, every process is scrutinized with accuracy so just, that habits in husbandry, no matter how ancient, or how much revered must yield to plans more perfect.—And implements or machines, no matter what their structure, or how much celebrated they may hitherto have been, they must all give place to such as are found to be better adapted to their respective purposes.

Under these impressions, I am quite aware that the time is coming, (perhaps it is near at hand) when implements of husbandry will be valued by their merits only, and not by their appearance, or price, or the recommendation of whoever may take a fancy to that particular form. Therefore, having applied the word *improvement* to those implements which I make; the object of this communication is, to convince those interested in their use, of the fact;—and also, to caution all persons whomsoever, against making and using, or vending those improvements without my consent.

STRUCTURE. In order to give a better idea of the structure of those implements, I have obtained drawings to assist me.—Although the plough has been the most material implement of husbandry, for thousands of years, I have not learned that there has ever been much attention given to its structure until within a few years past. But since it has become a subject of attention, many very interesting men have undertaken to advance its improvement, and a great many forms have been made, and tested.—Having come at a knowledge of what others have done, together with the use of the Dynanometer, by which I could with certainty test each result; has afforded me an opportunity of realizing facts respecting improvements in the plough, which I believe will justify me in recommending those which I have made.

The first drawing exhibits a figure of the Barshare plough, taken perspectively, so as to delineate the most material parts. By which it will be seen that the shear, (or cutting edge) is made of wrought iron; and so shaped, as to be easiest made, strongest, and easiest kept in repair. It is fastened to the plough with two screwbolts, one passing through the mouldboard and wing of the shear; the other through the heel of the shear and handle of the plough. I believe the point and edge of this share to be the most natural and perfect shape.

The next is the moulding part, or mouldboard. The shaping of the face of which, is found to be the most material part in the structure of the plough; and I believe, one of the most difficult processes in mechanicks.—Not being able to find a rule to work by, which would produce the desired shape; I determined upon trying experiments by testing, or realizing such shapes as fancy might dictate; in the course of which, I have (besides the number I have seen of other's make) made sixteen different patterns for the mouldboard of the plough. And whether the present is the perfect shape, futurity will tell us. But that which I have found to be most complete, is partly a section of a cylinder, whose radius is about equal to the width of the furrow the plough is intended to turn; but made so that the fore and rising part is considerably concave, and the lower part behind rather convex.—The mouldboard is made of cast iron. (This is a great improvement in the structure of ploughs, because, if we can once attain the perfect shape, we can always retain it.) The top of my mouldboard extends up to the beam, and is attached to it by a strong screwbolt, which passes through an iron brace that extends from the top of the mouldboard down to the heel of the shear and handle of the plough.

THE COULTER.—I have made some ploughs to work without any coulter at all, and where there is no tussicks, or a stiff sward to cut, I believe they are quite as well, and many say much the best without in all such as clover, stock, or stubble land, and some use them in a blue grass sod. I have made many ploughs with the common sward coulter, but applied to the side of the beam, instead of passing through it. The advantage of applying the coulter in this way is, that it stands plum, and cuts the sod so that all the after part of the plough except the land side, runs clear of the edge of the furrow, and that it may be used with or without the coulter at pleasure; and as there is no coulter mortice through the beam, it is stronger, and less apt to be abused. Very recently, I have applied a horizontal coulter. This I believe to be entirely a new structure of the coulter, and so far as it has been noticed, is much admired; it may be made of cast or wrought iron, or steel, has an edge at each end, that when one is worn dull, the other can be applied. It is so constructed as to answer every purpose in cutting the sward or sod, and still preserves the broad circular throat of the plough, which is so constructed as to prevent the plough from choaking; this is an advantage that those will know how to compute, who have been in the habit of turning in large growths of clover, weeds, stubble, &c. its form may be seen by referring to the drawing. Each end of the coulter is seen, one in its proper position just forward of the fore part of the mouldboard, the other end resting against the outside of the left hand handle.

STOCKING. My ploughs are put together without mortice or tenon, but with iron screwbolts; the beam being fastened to the top of the mouldboard with a single screwbolt, from a swivel by which they can be so constructed as to adjust; so as to work after two or three horses abreast; which is effected by fixing a block between the handle and the end of the beam, when the block is in, it is then set to work after three horses; it is also necessary to have a brace to extend from the screw outside of the beam to the handle and fastened with a screw bolt; this brace prevents that end of the beam from drawing down by the operation of the team When the block is out, and the beam drawn up tc the handle, there is no need of the brace; the plough is then set to work after two horses abreast; or two or more oxen. I fasten an iron brace on top of the beam to the main screwbolt, and to the right hand handle which answers two purposes—one is to support the handle, the other for the plough line to lie on, and prevents it from being caught under the furrow.—In constructing this plough, I have endeavoured to retain, and add every thing necessary to make it perfect, and to avoid every thing that could be done without. The timber is worked as nearly strait as possible, in order to avoid working it across the grain.

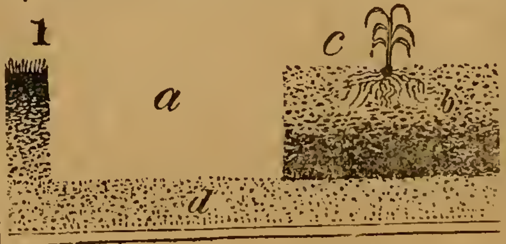
When those ploughs are first put to work, in some situations, it will be necessary to rub the mouldboard with a brick, or sandstone, in order to make it scour, and be sure to remember, that the plough will never work to perfection, until the mouldboard does scour completely smooth. They are calculated to run deep or shallow by altering at the clevis, and backbands. If the team should walk wide, so that the plough would incline to take rather too much land; put a piece of leather between the handle and beam. If the team should crowd to the furrow, so that the plough does not take land enough, take a little off of the beam, and so repeat the process until the plough runs exactly to suit the team.

SUBSTRATUM PLOUGH. The 2d figure, is made much in the form of the common shovel plough, except the leg, the lower part of which is made of a strong bar of wrought iron with the edge forward, bent in a suitable shape and attached to the beam with a screw bolt, and to the wooden part of the leg, by means of two strong straps, rivited to the iron, and screwed to the wood; thus constructed it is simple, and very strong considering its weight. The cutting edge or substratum shovel may be made of wrought iron or steel, and of any shape, square, round or oval; the present are made of cast iron, and round, so constructed that both sides are exactly the same shape, a countersink on each side, whilst one forms a rest for the toe of the leg iron, the other protects the burr of the screw, by which it is fastened on, from wearing. When the shovel is worn to a bevil on the under side (in front) so that it don't stick properly to its work, loosen the screw and turn it until a sharp part is brought forward, and so repeat the process until it is worn to a bevil all round, then take it off, and turn it upside down; this will place the bevil on the top, and render the shovel completely sharp, and so proceed as before. Price for the substratum plough $8. Those ploughs are designed (in part) to work after the Barshare Plough, in the same furrow, in order to produce a deep tilth, without burying the soil or mixing the under stratum with it; this they will do with the power of two horses, or a yoke of good oxen in common land, to the depth of from 6 to 10 inches, and to the greatest perfection. Also to be used in the drill husbandry, in the cultivation of small grain, corn, potatoes, &c whenever it is desired to cultivate the land deeply without mixing the under stratum with the soil. They will pulverise the ground to any depth, without casting a furrow so as to cover the smallest vegetable, and by enlarging the shovel (or cutting edge) and altering its shape, this ploguh may be adapted to working land foul with weeds, and what is termed scraping tobacco.

Figure 3. ADJUSTING SHOVEL PLOUGH. The stock of which is made much in the form of the common shovel plough. There is a cast-iron fastened to the lower end of the leg with a strong screw bolt, which we term the leg-iron; to this the shovel, whether round or squáre (see figure 4) is fastened with a single screw pin. The plough can be adjusted, that is set to work, deep or shallow, by putting a bit of wood or leather between the leg iron and the leg above or below the screw bolt, as may be required—and when one part, or corner of the shovel wears dull, loosen the screw and turn down another, and repeat that process until the shovel is worn all round. The shovel may be made of wrought iron or sheet iron; the present are made of cast-iron which are found to be much the cheapest; and most uniform; they are made concave, and work with the concave part forward, by which means they work deeper, pulverise the ground finer, and leave it much evener on the surface, than the common shovel plough does. Those ploughs are well calculated to work in a deep soil, sand, or loam.

I have reason to believe, that the shovel plough is not known (or at least used) at all in some parts of the country. They are certainly a very useful implement; but to those not accustomed to use them, they are at first quite unpleasant to operate with; this is owing to their standing on a single point, of course would incline to run any other way as soon as the right one, therefore, need strict attention. But a few days practice will render them quite pleasant to work with, and it will be found that they will pulverise the ground to greater perfection, than any other implement.—One difficulty in operating with the shovel plough is, the management of the horse: the ploughman must hold the plough with both hands, then if the horse is awkward, or wild, he is to manage also. Take double lines, and make them just so long that the ploughman can stand, or walk at ease, with the line over one shoulder, and round his back, and under the other arm; thus it will be found, a little practice with some skill, will enable the ploughman to manage the most refractory horse if he will only pull, and without saying but very little to him. By twisting the body a little he can incline the horse to the right or left, and by holding back regulate his speed or stop him at any time.

1



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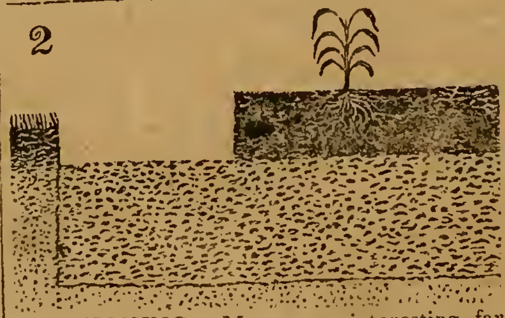

PLOUGHING. Many very interesting farmers, have taken up the idea, that deep ploughing is an improvement in the art of husbandry; that—in fact, the deeper they plough their ground, the deeper they make the soil; and of course the richer the land. With whom this notion originated I have not learned, and it matters not: as it is entirely incorrect. As for making land rich, merely by deep ploughing, it is just as absurd, as to attempt to satisfy hunger by drinking more water.—The case is very plain. In déep ploughing, where there is but a thin soil, it is either buried so deep as to be of little or no use to vegetation; or is mixed with so much clay, (or under strata) that it is all made poor, and of quite as little use.—Deep ploughing qualifies the ground to receive more moisture, and will afford an opportunity for the roots of vegetation to run deeper. Hence it is, that where farmers plough their land deep, their crops suffer less with drought; and will sometimes yield a better increase. But the land is not any the richer, for the deep ploughing.—Deep ploughing done in the common way, is very injurious in the production of troublesome weeds, and all such growths as the husbandman wish to keep clear of. The reason is because the seeds are buried at every depth from the surface to the bottom of the ploughing, and at every operation in tillage, which brings them within the influence of the atmosphere, they vegetate and grow; thus it is, that the farmers are so much beset with these unwelcome growths. My idea with respect to a preventive is, to work so shallow with the barshare plough, that all the seeds that are turned under, will be within the influence of the atmosphere, where they will vegetate and grow, and when they get to a suitable size, turn them under with a plough, or cut them off at a proper depth, with some suitable implement, and they will perish. By an attention to such a process, as this proposed, I believe the farmers might get clear of many very troublesome weeds, which it is almost impossible to get rid of, whilst they plough their land deep at one operation.

In that portion of the country, best adapted to the growing of wheat, with which I am most acquainted, if the soil is found to be 3 inches deep, the land is said to be very good.—Then, suppose it to be a clover lay, and that it be ploughed 7 inches deep; that there be 4 inches of clay thrown on top of the soil; that it be sown with wheat, and harrowed in (I have seen this process practised in some neighborhoods, and produce tolerable crops of grain.) But some very unfavourable effects must result.—The first hard rain that falls on land in that situation, (especially if the clay has been made very fine by harrowing) it will become soft, and run, or cement together like mortar; and form a coat or crust, which when wet, water will hardly penetrate; of course, instead of soaking into the ground, much will run off, which, besides washing the land; the crop needs the moisture.—And, when that coat or crust becomes dry, it is very hard and unfavourable to the growth of vegetation.—Again, when the surface of a field is composed of clay, the atmosphere operating on it—it becomes very fine and compact, so that it holds too great a portion of water, at or near the surface; it is the water, that the frost operates on,—frost has no effect on the clay when dry; hence it is, that a clay surface with its thin coat of verdure will freeze to a considerable depth in a situation where a rich soil with its thick coat of verdure would not freeze at all; and this is the reason why winter grain is so much effected by the frost when sown on clay, and clover so much drawn out of the ground during the winter season.—When clay has been operated on by the frost, and is thawing, the particles become so extremely fine, that they will float in running water to a great distance; thus it is, that fields, the surface of which are composed of clay, wash so much.

The great art in husbandry, is to assist nature, which we see has fixed the soil on the surface, universally, in the growing of every thing, from the most tender plant, to the most solid oak. It is the soil that contains the principal part of the vegetable matter, which must be decomposed, and also in solution, (that is mixed with water,) before it is qualified for vegetable food; if so, the soil should be kept on the surface; because, there the atmosphere has the greatest influence on all matter. If this is admitted as the fact; see how contrary to the nature of those things, most of the husbandmen act. Yet so it is.—When the soil is kept on the surface, it decomposes or rots the fastest. Its particles, though they may become as fine, or even much finer than those of clay, yet they have not that adhesive quality, which would make them run, or cement together, like mortar, as the clay does.—And when rain falls on the soil, it soaks through so long as the broken strata underneath will retain it, and even if the water runs off, a surface composed of soil, does not wash as much, as when composed of clay. And when dry, it is not too hard, it never bakes, it is so qualified as to be exactly right. Besides this, it is known, that dark colours attract a greater portion of heat from the atmosphere, than light colours do, and I presume that it is the heat of the atmosphere, that renders vegetation active, and enables it to perform offices necessary to its life and growth; this assures us, that the soil should be kept on the surface. Again when the soil is buried 3 or 4 inches under the natural stratum, the atmosphere has but very little influence on it; and even if it had, it is a considerable time before the roots of vegetation, (which is planted or sown on the surface) run deep enough to derive any benefit from it; this also would teach us, that the soil should be kept on the top.

The 1st section in this drawing is intended to exhibit a view of deep ploughing, done in the common way—*a* shews an open furrow,—cut 7 inches deep, and 14 inches wide, in land where the soil is only 3 inches deep; *b*, the furrow slice turned over on the bottom of the preceding furrow, with the soil down, and 4 inches of clay on the top of it; *c*, a plant of corn with its roots first in the clay, entirely above the soil; *d*, the unbroken stratum, on the left hand, and under the tillage.

The 2d section, will exhibit ploughing, done at two operations: an open furrow (is seen) cut only 3 inches deep, 10 inches wide; and that the furrow slices, including the soil only, are turned over on a bed of substratum, pulverised to the depth of 9 inches, (this is done with the substratum plough,) a plant of corn is seen with its roots fixed in the soil. On the left hand and underneath is seen the unbroken stratum.

(To be continued)

FROM THE NATIONAL GAZETTE.

CHICORY THE BEST SUBSTITUTE FOR WEST INDIA COFFEE.

Several specimens of Germanic, formerly called Westphalia Coffee, have been placed in my hands by an importing commercial house of this city, with a request that after a sufficient number of trials of the beverage it yields, I would give some account of the plant from the root of which it is obtained, together with an opinion of its dietetic properties and effects.

A quantity of this prepared substitute for coffee, having been introduced from the manufactories in Germany into this city, which I understood from the importers is intended to be offered for sale, it appears to me proper that the citizens who may be disposed to try, or habitually use the beverage made from it, should be acquainted with the information requested. I have, therefore, subjoined an account of the plant from which this succedaneum is prepared, after having frequently used in my family the beverage made from the specimens sent me, both alone and combined with coffee.

Germanic or Westphalia Coffee is manufactured from the root of the *Cichorium Intybus*,* Succory, Cychory or wild succory.† This plant is not a native, but has been introduced into the United States, probably with grass seeds, and has become naturalized, being frequently met with along the margins of cultivated fields, and by road sides, among rubbish. In the neighbourhood of this city it is quite common, and particularly abundant on the Ridge Road near town, and on the Frankford and Germantown roads. It is sometimes, but not frequently met with in the Neck, on the Lancaster Turnpike Road and other highways. The root is perennial, shaped like a carrot or raddish root. The stem is about two feet high, erect and branched, its branches straggling, garnished with a few short leaves, those of the lower part of the stem and those proceeding from the root, being much longer, and resembling the leaves of dandelion. The flowers are bright blue, sometimes white, about the size and form of those of dandelion. The endive or winter curled sallad, of our markets (*scarole* or *scariole* of the French) is a species of the same genus to which the Cichorium Intybus belongs, and by Poiret is conjectured to be the identical plant, varied by culture, though the endive is more generally supposed to be a distinct species originally from the East Indies.

Every part of the wild succory root has a fresh and bitter taste; and in a greater degree in the wild plant, than in that subjected to cultivation. On breaking it a milky saponaceous juice exudes, which is bitter and slightly styptic—this juice seems to contain the peculiar virtues of the plant. These are said to be stomachic, stimulating, refreshing, aperient, demulcent, resolvent, deobstruent, &c. Geoffery asserts that the mild bitterness of the succory invigorates the stomach, excites the appetite, aids digestion, and frequently promotes perspiration and expectoration. Murray is inclined to think it useful in emaciations, melancholy, hypocondria and consumptions, and in diseases of the throat and breast. Van Swieten declares that the root of succory has had extraordinary effects in visceral obstructions and the disorders which they produce. Several writers of great respectability say that hysterical females have been cured by the use of the juice of this plant, and that the decoction either with or without milk has been serviceable to melancholy hypocondriacs. Some authors pretend that the powder of the dry leaves acts beneficially in diseases of the skin, in gout and rheumatism. The expressed juice has been medicinally employed, and it is said, often successfully in catarrhal engorgements of the lungs and in visceral derangement. United with ammoniac and other stimulating articles, it has frequently been used in intermittent fevers: but it cannot be doubted that in most cases which it is believed to have cured, the good effects were derived principally from the associated medicine. This opinion is supported by Alibert, who remarks, in opposition to the extravagant encomiums on the virtues of succory, that they are at least problematical as regards the removal of obstructions and cure of intermittent fevers; and that he sees no good reason to assign to the plant any peculiar efficacy against certain diseases.

Chaumeton, Chamberet, and Poiret state that succory root is very much used in the north of Europe, and in France, as a surrogate for coffee, and that it is used in the latter country to adulterate the coffee which is sold in powder or ground, in the shops: and I learn from the importers of the prepared substitute, who have requested this account, that immense magazines or factories, are established in Germany, for the sole purpose of its preparation. The manufacturers collect the root towards the end of autumn, it is then cut in slices, dried, afterward torrified and pulverised or ground. The French authors say, "it is used in infusion or decoction with water, to make a drink which has all the appearance and bitterness of coffee, without possessing the other precious qualities of that useful beverage. But that it is nevertheless applied to the same uses, either alone or mixed with milk or cream." They state that it is necessary to take great precaution in keeping it, since, in large masses, it is liable to spontaneous combustion. Murray states that five houses in Augsbourg, were consumed by a fire which had originated in a magazine, in the midst of a great quantity of this substance.

The Egyptians consumed immense quantities of succory, and the Greeks also used it. In Europe it is continually cultivated for economical and pharmaceutical purposes. Cattle eat the leaves during scarcity of pasture, and they never at any time show dislike to them. It thrives in any kind of soil, and any exposure, resisting droughts, deluges of rain, hail, or cold. It grows speedily, and forms an excellent forage for cattle in the spring. Under cultivation, it is bleached, like celery, by screening it from air and light, and in this state, forms an excellent and healthful sallad. Geoffrey says that intermittent fevers, which had resisted other means, had been cured by a free use of succory sallad.

To return to the root, as a substitute for coffee. From the preceding accounts of the properties of succory, it will be evident that it is, comparatively with coffee, an inert, or at least an inactive plant. And it is doubtless destitute of the subtle, heating and very stimulating effect of the favourite beverage made from coffee seeds. The empyreuma, on which the fine flavour and exhilirating powers and much of the peculiar effects of coffee depends, is wanting in the succory—it can therefore never be made to possess the delicate and grateful taste of coffee, while it will certainly be incapable of producing the same injurious effect. From the trials I have made of it, I believe, as a dietetic article of family use, it is more healthful than rye coffee, and has a softer and more agreeable taste; it is less injurious to delicate constitutions than coffee—it is less heating, more perspirative, less stimulating than coffee; and, though far inferior, as every substitute must be, to genuine coffee taken in moderation, I yet believe the health of the community, the female part of it especially (to whom there can be no doubt coffee is peculiarly injurious,) would be benefitted by using a moiety or two thirds of this article, mixed with one half or one third of genuine coffee. That it is preferable to torrified rye as a succedaneum, I fully believe. And this opinion is supported by the sensible properties of succory root, and those preserved in the prepared surrogate. Under these impressions, and influenced by the opinion that rye coffee is, to most constitutions hurtful, to some extremely prejudicial, I feel no hesitation in recommending to my fellow citizens the use of succory coffee; and so favourable is my opinion of its healthfulness and economy, that it is my intention to propose to the honourable the Secretary of the Navy, that it be introduced into the diet of sailors on shipboard, and soldiers in marine posts. The opinion just stated of the unhealthfulness of rye coffee, demand a word or two in its justification, since it is so palpably opposed to the prejudice and interest of a large proportion of our population. It is grounded on the observations I have made in my professional practice for some years past. I have found numerous instances of distressing cholic and flatulence in delicate constitutions and sedentary persons, traceable to no other source, which have appeared a short time after the free use of rye coffee; and which continued until I interdicted its use as a daily beverage. But I have seen other more distressing affections, attended, particularly in females, with violent habitual spasms—produced, as I believed, by small portions of spurred rye or ergot, which had been mixed with the pure grain. In such cases, I have only succeeded in procuring relief, by interdicting the use of the beverage. My suspicion of the presence of ergot has arisen from an actual detection of elongated grain in masses of unground torrified rye, which grain appeared to be nothing more than the incipient state of the spurred or poisonous seed. The same thing I have observed in examining the heads of rye in the rye fields, during botanical excursions. While I am sensible that great care is taken by the manufacturers of rye-coffee to cleanse the grain of extraneous substances, I still believe that the cockle seed and half-spurred grains will elude detection. I subjoin a translation of the remarks and directions printed in German on the papers in which the succory coffee is enveloped, with this single remark that it should be made either mixed with coffee or by itself, by pouring boiling water on it through a bag or strainer.

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* *An inaugural dissertation on this plant by Rodolphe Jacques Camerarius, was published at Tubingin, to which the curious are referred.*

† *Chicoree, chicoree sauvage, French; zichorien, wægwart, hinllæuft, German; cicoria, cicorea, radichio, Italian; achichoria, chicoria, Spanish; wægwarda, Swedish.*

WILLIAM P. C. BARTON.

Use and qualities of this Surrogate of West India Coffee.

This elegant Surrogate of coffee is very conducive to health, does not heat the blood—is not injurious to the eyes—nor does it affect the nerves, but assists digestion.

It may be drunk without any addition or with a small proportion of coffee, agreeably to the taste of the persons using it; it is prepared in the usual manner of coffee.

Directions for using the Germanic, formerly called Westphalia Coffee.

To one portion of 3 cups take of this coffee 1-4 Loth, this would be according to our weight only the eighth part of an ounce, and appears to me a great deal too little; and if you wish to have it quite similar in taste to real coffee, add 3 or 4 beans, and prepare it as usual. But even without this addition, it will be found an agreeable beverage, as in its preparation the greatest cleanliness is observed, and its component parts consist only of such things as are conducive to health, by no means injurious; and may be submitted to any medical examination.

Professor Barton's remarks will prove interesting to our readers, so far as they explain the medical qualities and effects of Chicory and of Rye, when used instead of coffee—but those who have been subscribers from the commencement of this work, will recollect that several communications, commencing with one from Judge Holmes, of Winchester, in the first volume, have been published, to show, that of all substitutes for imported coffee, the root of this plant affords the best; and that it is, perhaps, yet more deserving the attention of Farmers, as food for their stock. Mr. Bellinger, recommends it as being little affected by the winter in South Carolina, and as yielding the best early pasture for sheep. For a very satisfactory paper, in relation to the uses, mode of planting, and yield of Chicory, the reader is referred, especially, to the American Farmer, vol. 3, page 65.—*Edit. Am. Farmer.*

FROM THE NATIONAL INTELLIGENCER.

NATURAL PRODUCTIONS OF MISSOURI.

SENATE CHAMBER, MARCH 3, 1823.

Messrs. Gales and Seaton:

Gentlemen—I wish you to publish the enclosed letter. The facts stated in it, relative to the vegetable productions of Missouri, will give correct *data* for forming opinions about the soil and climate of that country. The writer is a gentleman of science, character, and fortune, greatly attached to the pursuits of agriculture, and entitled to an implicit confidence in all his statements.

Yours, respectfully,
THOMAS H. BENTON.

Franklin Missouri, Nov. 24th, 1822.

SIR—Agreeably to your request, I have forwarded to you some of the largest specimens of plants which have been reared in my garden this year, with a few others of two years growth.—You will bear in mind, that I have not travelled for these samples out of my own garden, which was laid out on the poorest part of my land, and on which there has not a particle of manure been spread. It is a rich sandy loam; contains, for vines and other small fruits, &c. eleven acres, and has too great a portion of sand in my own estimation, but in the opinion of my neighbours, a great deal too much.

Perhaps it may afford some satisfaction to know, I live on the north bank of the Missouri River, about 180 miles above its mouth, in latitude 39, and in a bottom whose greatest extent, from East to West, is about 25 or 26 miles, and whose average breadth is about 2 miles. I know of no part less than one, nor many above 3 miles in width. At Boon's Lick, the bottom is about its medium breadth. That our country is incomparably rich in its products of corn, wheat, and such articles as are generally raised in the Western countries, I believe has never yet been disputed, and I need not particularise them.

It is known to most, that an individual of any species of plant may accidentally attain to great size, even on a poor soil; and that some soils abound with salts peculiarly adapted to the nurture of particular species of plants; and that, consequently, the whole species will be reared to great perfection on them. But, it is not known by any farmer, that a great *variety* of plants can be raised, to great perfection, for a series of years in succession, unless the soil and climate be both rich and warm. Let me not theorise, but leave it for others to conjecture the causes of the great fertility of our country: facts are all I vouch for; and these not conjectural, but such as I have determined by the trial.

By the by, these theories, or conjectural causes, though a source of much error, have yet afforded me much occasional amusement, and I seldom go to Tennessee without experiencing its exhilirating influence. My acquaintance meets me, and exclaims, "Ah! my old friend, are you alive yet, and just come from that *cold* country?" *Hardeman.* "I am alive, you see, and I left the Missouri but ten days ago." "Well, what are the times there? I suppose you came down to purchase your old plantation again: or perhaps to buy cotton?" *H.* "I am content to live in Missouri; and, as for cotton, I raise what I want." *H.* "Come, come, my friend, that will not do—for cotton to grow in the Missouri, is out of the question." "Why so?" "Because it lies too far north; and because it is so much elevated; for you know that high mountains, even in low latitudes, are covered in the summer time with snow; therefore, a high latitude, and a high country conjoined, must produce the most extreme cold." Generally, here, I yield to my acquaintance; and answered his conclusion, by stating the advantages we derive from this cold: That it is the only spot of earth which civilized nations allow to be inhabited by civilized people—that is, free from the visitations of the Devil: that, in fact, he once came here, piping hot, and was immediately seized with such a *chill*, that he ran back, swearing he would never visit so cold a place again. Thus I break with those whose idle dreams prevent them from observing useful facts. But, the cotton: I raised about 1,200 lbs. in the seed, per acre, this year. I say *about*, for I was away from the State in September and part of October, when a part was picked out, and put up without being weighed; but, from what was gathered before I left home, and since my return, I am satisfied there is no great error.

It is the opinion of some men, that a *certain* number of *days* is necessary to perfect a vegetable, in any soil or situation, and that cotton, being a native of a southern country, where the seasons are long, in which this plant grows, it cannot be brought to maturity in ours. Here is another sort of theory, about which I shall not detain you so long as I did with the other, but simply say: I planted my cotton about the 28th of April: a drought was then prevailing here, and it continued until the 30th of May, at which time a rain fell. In a few of the first days of June, my cotton came up; on the 6th July, I saw blooms; on the 16th August, it began to open; and the field was picked over on the last days of August. Our old friend, Dr. John Sappington, who lives a neighbour to me, says his cotton came up from the 8th to 10th June, the seed having laid in the ground something more than five weeks; and he raised this year, by actual measurement of the ground, and weight of the cotton: To say, 10¼ acres of ground, picked out before the 15th instant, 10,272 lbs. of clean dry, white cotton, of fine staple. His letter to me this day, and now lying before me, informs me of this; and, further, that there is now open in his field from 1,800 to 2,000 lbs. to be gathered.

In order to test this theory a little better than Obadiah did his, by his wife and cow, I planted some Indian corn on the first day of May.—On the 9th June, it was in silk; on the 15th July it was ripe. I planted some of the *new* corn, which was then ripe enough for the purpose, on the 10th July; on the 11th August it was in silk; on the 10th September it was ripe; being the second crop, or two generations in 4 months and 10 days. I planted some other new corn on the first of August; and on the 1st September it was in silk; on the 1st October it was ripe. Thus, in 61 days I have perfected a generation of Mandan corn.

The timber is not generally tall in our country, particularly near the prairies, where it is thinly set; the bodies are low, with large spreading tops, even in our richest lands. In the bottoms it is otherwise; for there it is thickly set, and tall. Gen. T. A. Smith has had several cut into rail lengths, 11 feet long, and 7 cuts to the tree, which would require a body of 84 feet of straight timber. Mr. Hater cut one, a few days ago, in this bottom, from which he got 8 rail lengths, of 11 feet each. Allow, then, as is really done, for the stump and half the gap made in cutting the logs off, it must have taken a tree of 95 feet to produce these rail lengths. A hollow sycamore tree, which stands about half a mile from me, I measured, and found it required 43 feet to compass it. This is the largest that I ever saw.

Lately, I measured some trees which I am rearing for shade, and their girths were, Catalpa 2 years old, 37¼ inches round, proportional height—Black locust, 13 round—Balm of Gilead, 13 5-8 round—Catalpa *one year's* growth 7½ inches round—White Mulberry, 6 inches round—Sweet Cherry, 5½ round—Tulip poplar, 6 round—Sycamore one year old, from a stump in the garden, 10¼ inches round—Grape vine, one year also, 3 inches round, 20 feet long. Annual plants—Black mustard, 9 feet high, 4½ inches round; this is the evangelical mustard that the fowls of the air roosted upon. White do. 4 feet 5 inches across the leaves—Ruffle do. 4 feet 3 inches across the leaves; Palma Christi, 14¾ inches round, and supported me standing erect at the main fork, 4 feet above the ground, and 13 branches being below, most of which were 8 feet in length. Asparagus stalk, 3 inches round, 8 feet 3 inches high, the root being only two years old. Salmon Radish, 19½ inches round, 26¼ long; another 18¼ round, 36½ long. White summer, do 23 inches round, 16 inches long, and broken off by drawing up, the point 2 inches thick. Hemp stalk, 15 inches round, its branches 9 feet long. My hemp raised for seed grew in length from 12 to 15 feet. One stalk, raised by my neighbour, measured in length, 18 feet 7 inches. Turnips now growing, one measured on the 9th inst. 30 inches round. Yesterday I drew up three, which grew about a foot apart, and their measures were 27, 28, 28½ inches round. I raised this year on two vines, they were so blended I could not separate them, 4468 cymlins, or squashes. On one vine I raised 96 citron melons; one, taken as a medium size, weighed 7 lbs. then 96×by 7=672 lbs. I had three days ago dug from one hill, one bushel and a half and one quart of Jerusalem artichokes; these were raised without any cultivation, except the planting of 3 or 4 small bulbs in the hill last spring. This plant I have seen growing spontaneously in the prairie near St. Louis.

On the 16th instant I killed a steer 5½ years old, which was raised and fattened in the bottom without being fed, except 15 days to prevent his falling off before the weather would change—neat beef, 884 pounds, tallow, 181 pounds. He was inferior to several others of the same age.

I cannot forbear saying something more about my asparagus. I have 12 square rods set with it, not one particle of manure. The roots planted in the native soil, 18 inches apart, and 6 inches deep. Since I sat down to write, one bunch has been counted, and it contains 81 stalks. This abundance is from one root in two years time.

My vineyard contains from 6 to 800 plants, mostly of European kinds; and they grow luxuriantly, as you will perceive from the specimen above stated; it was the Bordeaux. Our native bunch grape is acknowledged, by all who have tasted them, to surpass any other indigenous grape in the United States. I shall transplant 1 or 200 next spring, to see if cultivation can improve them.

In the fore part of this week, in getting timber to build a cabin, I found about a peck of bees-comb, hanging to a *limb*. The negroes, after I left them, got it down, and stated, on inquiry, that it contained a quantity of good honey. This fact I mentioned to two other persons severally, and they each told me of something similar, which fell under their own observation. One said he was hunting for deer last fall, and found a large quantity of comb depending from a limb—he had 3 others with him, and they shot through the comb, and cut off with their rifle balls as much honey as they all could eat, and left the remainder for the next fortunate hunter. The other man to whom I related my story, believing it not to be a new case, said, that, in the summer, he went with 4 others to a prairie, about a mile off, and in the bottom, to run a race, and while they were getting their switches to ride with, they found as much honey as they could all eat, suspended from a limb not longer than a chainpost. Thus, having mentioned my case to but two others, and they both knew something better, I concluded it was a case so common as not to merit the relation; therefore, I left the story at rest, except my sending it thus to you.

Respectfully yours,
JOHN HARDEMAN.

Col. BENTON.

TO THE EDITOR OF THE AMERICAN FARMER.

HYDROPHOBIA IN SHEEP.

Springdale, Va. 18*th March*, 1823.

DEAR SIR,

The effects of hydrophobia were singularly exhibited a few years since, on a flock of sheep belonging to the plantation of my father, in this county. As the facts were at the time perfectly novel to me, and may still be interesting to others, I have thought them not wholly unworthy of a place in your excellent paper.

In the month of February, 1810, while it was intensely cold, and a very deep snow covered the ground, the flock of sheep were confined in a small enclosure surrounding a fodder house, which served the double purpose of supplying them with food and protecting them from the inclemency of the weather. In this situation they were visited by a dog belonging to one of my neighbours, which, although there had been something rather extraordinary in his appearance and conduct, had evinced no very marked symptoms of hydrophobia. About daylight in the morning he was discovered by the negroes, in pursuit of the sheep in their inclosure; but on seeing them, and being menaced with a stick, he ran off, but instead of going immediately home he took the direction to a neighbouring village, where he bit two cows, and disclosed other marks of unusual ferocity and ill nature. These circumstances at length excited suspicion of the true nature of his malady, and on his return home, he was shot. Upon examining the sheep, it was found that 15 or 20 had been bitten, most of them so slightly that in one instance, only, was it thought that death would probably ensue, merely from the wounds. The peculiar manner in which the animals were bitten, and the number injured, showed that the dog was actuated more by a strange and malignant propensity to mischief, than from the mere desire of food. Instead of killing them immediately, he appeared to have attacked them merely for the purpose of teazing them; and the impressions of his teeth were barely visible, on their ears and faces, and not unfrequently on their legs—In every case however, he succeeded in bringing blood; most of the female sheep were in their last stage of pregnancy, and so trifling was the injury they sustained, that they bore their lambs as usual, without exception; and before the lapse of a fortnight, their wounds were entirely healed. About this period hydrophobia first made its appearance. Two of the flock were found sick, and unable to stand, before they were known to be effected. In a few days the disease was observed in several others, and in this manner three or four in each week, disclosed the symptoms, and six weeks had elapsed before the whole number bitten, had been affected.

There was a peculiarity attending the early symptoms, which soon marked the individual destined shortly to become a victim to the dreadful malady. It first attracted attention by pursuing and tormenting its associates, by almost incessant libidinous actions. The diseased were all females, and several with lambs at their sides; yet their venerial inclinations were so powerful, that they exhibited in a most astonishing degree, the manners and actions of the other sex. In this manner did some of them, with persevering industry, teaze and torment a companion, for twenty or thirty minutes, until the fugitive would find shelter by mingling with the flock—a second would then be attacked in the same manner, and have to run the same vexatious round; sometimes the fugitive would turn upon its pursuer, and by an effectual resistance obtain relief. This paroxysm would intermit occasionally, and the infected sheep, would feed peaceably, with the others, if not disturbed; but upon approaching the flock, it could readily be recognized by its bold countenance, staring or glassey eyes, and an advance to make battle. In this state of the disease they would attack a man with much resolution, and beat him with their heads. In some instances I recollect seeing them advance from fifty to one hundred yards, from the flock, and attack persons so furiously, that they were obliged to defend themselves with sticks. After discovering more than common strength and vigor for a short time, an instantaneous debility appeared to come on, and their limbs refused to do their office. I have seen them in the very act of advancing vigorously to battle, fall as suddenly, as if shot by a ball from a gun. In a few minutes their strength would return, and they would rise again, to renew the combat. This I think might generally have been considered the second stage of the disease; yet in this situation their amorous propensities continued, for I have seen them fall, while pursuing other sheep of the flock. These paroxysms, or falling fits at last, became more and more frequent—the animal refused to take food, and became too feeble to follow the flock.—But even in this state of excessive debility, and while apparently suffering the most excruciating pain, the inclinations which predominated throughout the disease would still manifest themselves, until a complete exhaustion would terminate the struggle. The lambs which had continued to suck during the lives of their dams, were now fed by hand, and if I recollect aright were without an exception raised. The wool was invariably saved after the death of the sheep, without any inconvenience whatever; indeed as a proof that the blood of the infected animal cannot be injurious, unless commingled with that flowing in the veins of the living; the skins were taken from several hogs, which died of hydrophobia, the same time, and the bodies frequently eaten by the others, with entire impunity.—It was a remarkable circumstance, that with the infected animals, putrefaction ensued almost immediately after death.

Very respectfully,
WILLIAM M. BARTON.

ONIONS—POTATOES—GROUND SUITABLE FOR—SELECTION OF SEED, &c. &c. &c.

In vol. 4, page 374, a communication was published from a gentleman of the first respectability in New York, communicating an important fact, respecting the preservation of vines from the ravages of the bug, and stating also, "should "you desire it, I can send you some seed of an

"Onion of very superior quality, a large flat "white Onion—a kind we have raised in our "garden for more than twenty years in the "same beds, without finding any necessity for "change of seed."—Accordingly he has had the kindness to send some of the Onion seed, and with them, the following hints, which may prove useful.—*Edit. Am. Farmer.*

Bedford, *7th March*, 1823.

Sir—I have received your polite letter, and agreeably to your request, now forward to you by mail some onion seed, and some more melon seed. The ground should be highly manured for the onions; and the young plants not suffered to stand too thick. It is not necessary to change the ground—we have raised them now, for nearly twenty years—year after year, in the *same beds*, and we perceive no symptoms of degeneracy. Our melons are likewise planted every year in the same place. The great secret of preventing your vegetables from degenerating, is keeping your ground rich, and observing very great care in selecting your seed. When we take up our onions, they are spread in the garden walks, and one or two dozen of the largest and *flattest*, are immediately selected from the whole quantity for seed. A few years since, in the spring, being scant of seed potatoes, we unwisely planted the screenings, that is, the potatoes which were too small for the table; and the crop was hardly worth gathering. This lesson, has taught us to select the *largest* potatoes for seed. I take the liberty of sending you the list of premiums offered by our Agricultural Society; and when more at leisure than at present, may trouble you with some statements relative to our premium crops.

I am, Sir,
Your obedient servant.

☞ A southern, or even a middle state farmer, would be surprised to see a list of all the articles sold from a New England farm—instead of relying on one, or two, or three, they cultivate something of every thing, to suit, and to fill up all times and seasons, and though the sum received for any one may be trifling, the aggregate is considerable. He sells from a small farm, *cider* enough to pay for his groceries—beans to pay for his leather—hops to pay for his children's schooling, and so forth—reserving unbroken the proceeds from his chief products, to accumulate for his children—for old age, or a "rainy day."—*Edit. Am. Farmer.*

AGRICULTURAL SCHOOLS.

On the policy and advantages of Professorships for teaching young people, who intend to pursue farming for a livelihood, how to conduct their agricultural operations on scientific principles, Mr. Madison's address to the Farmers of Virginia, and the report to the Legislature of New York by Judge Buel, are so able and satisfactory, that nothing more need be said on that view of the subject; but there is yet room and necessity, for collecting details, to make known the history, and the practical effects of such establishments in Europe, with a view to the better organization of such, as may, and we hope will soon be instituted in America. The following remarks from the Editor of the New York Commercial Advertiser, present interesting general views, and prove that could the writer give more time to the consideration of the subject, he might afford yet stronger and more ample illustrations.

Edit. Am. Farmer.

With these among other views that might be stated, we beg leave to second the recommendation of the committee for the establishment of a LITERARY AND AGRICULTURAL SEMINARY. We shall not attempt to state minutely what would be its peculiar organization, but merely give some hints as to a general plan that might perhaps be adopted. Let a suitable farm for the various purposes of agriculture, of two, three, or four hundred acres to be selected—to be placed under the immediate superintendance of an accomplished theoretical and practical farmer. Let a suitable building, or buildings, be erected upon it for an Academy; and let able instructors of the English, Latin, and Greek languages, a professor of Natural Philosophy, of Mathematics, and of Chemistry, particularly agricultural chemistry, be provided. Here let all farmers who are able, send one or more of their sons, unless specially designed for the before named professions; and even then, if our ideas are correct, two or three years spent in such an institution, would be of great advantage.—Let the said farm then be properly divided for the various purposes of agriculture; and let it be cultivated in the best manner, by the students; who should have their time appointed between hours for study, for labor, and for recreation. In this way a competent knowledge of all the important branches of education taught in our Colleges, might be acquired; and in addition, when the pupil had completed his course of instruction he might return home a thorough bred theoretical and practical farmer. We would also have an experienced Horticulturist attached to the institution; and a large garden cultivated. This might be divided into parcels of various dimensions, suited to the age and capacity of the scholars selected from time to time for this department. As an inducement to labor, and an incitement to superior excellence, premiums might be awarded for the greatest skill, or the most labor performed in a given time; and the whole produce of the farm, garden, &c. should be applied towards defraying the expenses of the institution. This would greatly lessen the expenses, which would otherwise be incurred by the students, and would enable many farmers to educate their sons in the institution, who, in common cases, would be obliged to content themselves with giving them nothing more than a common school education. The farm should also be well stocked; and in winter, each scholar should have the care of a certain number of animals. He might also perform other work, such as threshing, cutting wood, &c. &c.

It does appear to us, that institutions upon this or a similar plan, would be of incalculable benefit to our country. By acquiring an education in this way, the pupil would be in no danger of getting a sickly constitution, so frequently the effect of sedentary habits. Their activity would be increased by exercise, and their nerves braced and strengthened by labour. Instead of the pale and ghastly countenances frequently brought from College rooms, we should see the rosy cheeks of health—bodies strong and athletic, and eyes sparkling with vivacity—but we have not room to pursue the subject. The public have our general ideas, thrown hastily together; and this must suffice for the present. We may resume the subject

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From the National Intelligencer.

CULTIVATION OF THE VINE, &c.

A small work has lately issued from the press of the enterprising booksellers, Davis & Force, of this city, entitled "A Memoir on the Cultivation of the Native Grape, and the best mode of making Wine," by Maj. Adlum. This is one of those works that have been long required in this country, and that, I conceive, must and will circulate extensively, from the value and importance of the information it contains. The cultivation of the grape, considered as a branch of agriculture, is of much greater importance than it has hitherto been supposed to be. It has been estimated, from correct data, by the author, that an acre of ground would yield 15,000 lbs. of grapes, which, at 6¼ cents per lb. would make

	$937 50
700 gallons of wine, at $1 per gallon,	700 00
	1,637 50
Expenses, labor, capital, &c.	500 90
Profit,	$1,137 50

If such be the profit of a single acre of ground planted in vines, it must be obvious that scarcely any other branch of agriculture could be more productive. And as this, too, can be carried on in connexion with other crops, it is a matter of astonishment that it has been so long neglected in our country. In a political point of view, also, its importance cannot be too highly appreciated. "We pay, annually," says a writer quoted by the author, "to foreign nations a sum of money *for wines*, spirits, and materials for making spirits, and *for fresh and dried grapes*, as great as our *whole specie medium*." If, then, the demand of our country for wines and grapes, could be met without resorting to foreign nations for a supply, this immense sum would be retained in the country, and applied to other objects of industry and national wealth. These are subjects, however, at which I can but barely glance. Time will not allow me to enlarge upon them. The indigenous vines are very numerous throughout the United States; in almost every latitude and soil they are to be found springing up, and spreading out in the richest profusion. The most of these, says our author, "are capable, by proper cultivation, of yielding a wine *superior to the best cider, as a wholesome beverage, and equal to most imported wines*." But these, he very correctly asserts, are diminishing daily, from the progress of improvement and the rapid increase of population; and, if not attended to in time, will become altogether extinct." To avert this evil, which might ultimately be deeply lamented Maj. Adlum has I understand, devoted a considerable portion of his life to the propagation of the native grape, and the fabrication of native wine. This wine I have drank, and, with many others, have no hesitation in saying, that it is not at all inferior to most of the foreign wines we receive, and that the grapes themselves are excellent for the table.

The object of the present little work is to diffuse a knowledge of the mode of cultivating the grape and of making wine, the want of which, it is presumed, has been the cause why so little attention has been paid to this very valuable production of the vegetable kingdom. This information, which the author has condensed and embodied in a few pages, will be found highly useful to all who wish to add to their wealth or their gratification, and will, I sincerely hope, be the means of extending the cultivation of this very valuable production of our country. To those who have gardens, as well as those who have farms, or country seats, it must be delightful to have their vacant ground bespread with vine-covered arbors, and to be able to regale their friends with the luscious fruit, and the not less luscious juice, of the grape. It would be, indeed, to realise the delicious picture of beautiful France, and to make this country still more lovely, more independent, and more happy.

VETIS.

INTERNAL IMPROVEMENTS.

FROM THE UNITED STATES MAGAZINE.

CANAL THROUGH THE ISTHMUS OF DARIEN.

Ingenious men have been much occupied with the idea of a communication between the Atlantic and Pacific Oceans, through what is termed the Isthmus of Darien. The late changes in the political institutions of this part of the globe, have given to this subject an additional interest; and we hope that the desired communication will rank among the first public acts of our sister republic of Colombia. But a few years have passed since a canal of the extent, was considered only to be the parallel of an Egyptian pyramid, requiring the wealth of an absolute monarch, and the labor and skill to be wielded by such power alone. Now, a single member of our young republic, constructs canals of many hundred miles in extent in the short space of four years, with an expense comparatively insignificant; and overcomes obstacles hitherto deemed insurmountable.

Our attention is now called to this subject by a MS. map of part of the Isthmus of Darien, with an accompanying memoir in Spanish, which have lately been put into our hands by our distinguished townsman, Dr. Mitchill. The map appears to be genuine, and is constructed as late as 1821, by W. E. Cortin. It embraces that portion of the Colombian republic, through which flow the rivers Atrato and St. Juan, between the latitudes of six and ten degrees north.

Humboldt, the most accurate and indefatigable traveller of ancient or modern times, has enumerated no less than nine different points of communication between the Atlantic and Pacific oceans, the most northerly being at the river Columbia, and the most southerly a conjectural passage in Patagonia. The mountainous range of the Andes opposes an irremoveable barrier to a free water communication, at all these points but two; and it is to these two points we beg leave at present to direct the attention of our readers.

In latitude 80 deg. 12 min. north is the mouth of the river Atrato, called Baracoa, emptying into the Bay of Candelaria at the bottom of the gulf of Darien. This bay is sufficiently large for all the ships in the world; it has good anchorage from fifteen to twenty fathoms, and sheltered from all winds. There is a bar of 200 *varas* in breadth, with five feet at low water, across the mouth of the Atrato, consisting of hard sand. The Atrato, in the memoir above referred to, is estimated at 530 miles in length, to its source, and is navigable for steam boats drawing six feet water, about 400 miles, to its junction with the Quito. It strongly resembles our Mississippi, in its inundations, its numerous windings and bayous, and in being filled with logs, *sawyers*, and other impediments to a safe navigation. These obstacles will be removed, as the country becomes settled and cultivated. Pursuing the course of the Quito, by a very shoal navigation, to nearly its source, we have only to cross the Ravine de la Raspadura, a distance of four and a half miles, and we arrive at the bank of the river St. Juan, which empties into the bay of Charambira, in the Pacific.

We are indebted to Humboldt for the knowledge of the fact, that as early as the year 1788, an enterprising monk, caused a canal to be made, connecting these two rivers: by means of which, in rainy seasons, loaded canoes have passed from the waters of the Atlantic, to. those of the Pacific. It is not, however, our intention, at present to examine this particular route, as another presents itself, less tedious and dangerous, and which seems to us far preferable.

Following the course of the Atrato from its mouth, a distance of about 150 miles, we come to a tributary stream, entering from the north, called the Naippi. This river presents no great obstacles to navigation, for a distance of 45 miles, from which point, a portage of six miles brings us to the bay of Cupica, opening to the Pacific. This portage is level and well adapted to a canal; and Cupica bay is safe, and sheltered from all winds. It is here, we think, that the only advantageous junction of the two oceans must be undertaken.

The shoal and rapid course of the Quito, clearly exhibits such an elevation of the country, as would prevent the construction of a useful canal in that direction—presenting the objection of numerous locks, and perhaps a deficiency of water at the summit level. The little cut made in 1788, will remain more an object of curiosity than of utility.

By the river Naippi, on the contrary, with a level portage, and perhaps assistance from the river Nasique that discharges itself into Cupica bay, a canal can easily be made, which would give facility to the transportation of merchandise from one sea to the other. We are not however, of the number of those who think that this channel would for centuries, be widened by natural causes sufficiently for sea vessels. From the most exact barometrical experiments the difference of level between the two seas cannot be but few feet—which difference may readily be ascribed to the want of minute accuracy attending this mode of measurement. From geological appearances, we are warranted in concluding, that the whole sea of Antilles has at a distant period been land, of which the numerous islands, are the remains. Hence, the gradual operations of the sea may, in the course of ages, make a passage through the isthmus; but there never will, we imagine, be effected by human agency, a free water communication for the largest ships. Humboldt has enumerated the many and important consequences that would ensue, if the two continents were disjoined; and the lynx-eyed jealousy of our English brethren, has already anticipated the serious results of this disruption, affecting the stability of her eastern empire.*

The countries watered by the rivers Atrato and Naippi are represented as fertile, and occupied by numerous hordes of hostile Indians, by which it is rendered necessary for boats on these rivers to be well armed. These hordes, under better political institutions, will be harmless, or disappear; and we consider it a matter of congratulation, that the spot designated for this important work falls within the limits of our sister republic, Colombia.

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* *A canal across the isthmus would facilitate the subjection of Japan, by giving the western shore of the continent, the advantages of the superior resources of the eastern shore. America may be looked upon as a stepping stone to the European strife, which has in view to reach eastern Africa. It is the nursery of the race of men who are to conquer and civilize Asia.—Vide Crawford's History of the Indian Acrhipelago, vol. 8 p. 337, et seq.*

RARITAN CANAL.

The Trenton True American has reason to believe that the expense of completing the Raritan and Delaware Canal will not exceed $250,000.—It would be cheap at a million, calculating the immense advantages which the three states would derive from it. The tolls would in a short time be $50,000 per annum, taking into consideration the commerce and travelling which would result on this great post rout. The steam boats would leave Philadelphia early in the morning, send the passengers in the canal boats at Lamberton, dine in the steam boat at Brunswick. and arrive at the Battery by sunset without difficulty or fatigue.—No time should be lost in commencing the project.

CURE OF THE DYSENTERY.

A physician at St. Clairsville, Ohio, states that "during the autumn of 1821 and 1822, the dysentery was very prevalent in the eastern section of the state, and in the latter season peculiarly obstinate. The various remedies recommended for that loathsome and distressing disorder, were prescribed with but little advantage, for the disease seemed to bid defiance to our utmost skill, and rendered all our remedies impotent and ineffectual. Thus baffled by a disease we could not remove, and the excruciating sufferings of our patients demanding immediate relief, we were compelled to resort to some other than the usual mode of practice. And accordingly, I prescibed to a young woman of strong constitution (but at the time laboring under a violent attack of the dysentery,) ten grains of the prussiate of iron, (in milk,) every two hours, and the effect was so immediate, salutary and complete, as at once to astonish the patient, the nurse, the friends and myself; since which I have used it in a great number of cases, with the most happy effects, and believe it to be a most valuable and entirely safe medicine, (in the hands of the skilful physician.) Since the publication of Dr. Zollikoffer's book, I have used it in some cases of bilious remittent fever, with great advantage, but in larger portions than he recommends, say from eight to fifteen grains in a dose, and repeated every six hours.

"I am indebted to Dr. Wright, of Baltimore, for the knowledge I have of this remedy, as it was from a paper published by that learned gentleman, some years ago, that I received the first hint of making use of the prussiate of iron as a medicine."—*Salem Messenger.*

AMERICAN PORCELAIN.

The editors, a few days since, when they published an article from North Carolina, on the subject of *Porcelain Clay*, did not recollect the manufactory of porcelains or *American China* which has been established at Corlaer's Hook, by Dr. Mead, and in a state of operation for many years past. Specimens of this manufacture, of unquestionable beauty and fineness, were exhibited during the late war. On the return of peace, with its influx of foreign imports, this business declined. But the last time I was at the establishment, some time last fall, it contained upwards of ten thousand pieces ready for baking. The doctor is at present absent from the city, or he would doubtless give a full and satisfactory account of this interesting branch of our domestic manufactures.—*N. Y. paper.*

DONT SCALD YOUR POULTRY.

A writer in the Connecticut paper remarks upon scalding poultry, as follows: Scalded fowls are ill looking and will not sell for so much as those that are picked, and soon spoil, often before market; otherwise the feathers although not of the first quality will amply pay for plucking. By scalding, poultry is deprived of its delicious flavour, is made insipid, often producing what is termed rising on the stomach.

FROM THE MAYSVILLE EAGLE.

John Wilson, better known as "Walking Wilson," commenced trading to New-Orleans, in the spring of 1800; completed his forty eighth voyage during the last summer, averaging nearly two and a half trips per season; and during that period has travelled by land and water one hundred and twenty eight thousand miles, in the prosecution of trade, as will appear from the following exhibit.

48 trips to New Orleans, 1600 miles	78,000
Walked 20 trips through the wilderness returning, 800 each	16,000
12 do. on horseback, do.	9,600
16 do. in steam boats, 1600 do.	25,000
	128,000

Wilson has more than once beaten the United States' mail whilst walking; man could never keep side and side with him; has never been overtaken by man on foot or horseback; is about forty years of age; possesses a constitution apparently unimpaired; has amassed a portion of "earthly goods," and is now in the "full tide of successful experiment," making his forty ninth trip. Wilson is a native of Mason county, Kentucky.

A PARODY

On Moore's favourite song of the Woodpecker.

I knew by the post that so gaily display'd
The sign of a bear, that a tavern was near,
And I said if a cask of good gin was e'er made,
The man that was thirsty might hope for it here.
It was noon, in the mud puddles scatter'd around,
In silence repos'd the voluptuous hog;
Every leaf was at rest, and I heard not a sound,
Save the innkeeper flogging a mischievous dog

And here in this lone little spot, I exclaimed,
With a pipe in my mouth and a drop in my eye,
With a cask of good liquor, old rye coffee nam'd,
How blest could I live and how calm could I LIE.
By the side of yon oak, where an old toper sips
His glass of gin toddy, how sweet to recline,
And to know that the liquor I raised to my lips,
Had never been tasted by any but mine.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 28, 1823.

☞ Those who receive this, the first number, will be considered subscribers to the fifth volume of the American Farmer. They will accordingly remit the amount of a year's subscription, forthwith, by mail at the risk of the Editor, and be pleased to accept his sincere thanks, for their continued patronage, and his assurances, that no pains shall be spared to give to this volume, such variety and value, as will make it worthy of being recommended by its present patrons, to the notice of their neighbours and friends.

* * *

☞ Commodore Porter's squadron, has arrived at St. Thomas. The steam-boat Sea Gull, being the first vessel of that sort ever seen there, "astonished the natives." Hearing of continued depredations on American commerce, by Porto Rico privateers, the commodore made—steam immediately to correct the procedure.

* * *

LATER NEWS.—Later intelligence, by a few days, is received from France by the brig Oak, Capt. Weeks, at Boston. War was considered inevitable, though it was not expected that any formal declaration would be made; the King's Speech being sufficiently intelligible. Troops were leaving Paris to join the main army on the Frontiers, preparatory to their march upon the Spanish Capital.—The Spanish Amdassador had left Paris for London, on his way home. England has taken no part—merely fanning the embers—it is easier to kindle than to extinguish war—like the wood cutter's fire which gets abroad in the mountains. *Produce of all kinds had risen in price.*

Letters received from Havre of the 2d February, state as follows.

"War is all the talk here at present; and it is the general belief that *England will make common cause with Spain.* Cotton rose yester day three cents per lb. and all in market was bought up. It is now 26 sous per. lb."—The following is a poscript to a letter from a very respectable French house at Havre, of the same date.

"A house of this city, yesterday received, by express, from Paris, orders to purchase all cotton remaining in market, for account of a house in Paris, which is very intimate with our prime minister, M. de Villele. We are assured the minister is interested in the speculation.—If it be so, you may consider it certain that" war will take place between France and Spain.

Another says,

"There has been a great rise in every article of produce in our Market, tobacco excepted. Cottons have risen 3 or 4 sous.—Georgia may be quoted at 26 sous, and as the demand is great will no doubt go higher.—Thirty sous have been *refused* for Louisiana. St. Domingo coffee has sold at 42 sous. French sugars at 110 per cent. profit, although they have fallen a little in Paris. All kinds of dye woods have risen very much, and rice is worth 42 francs—some even ask 45. In any event, the French cannot make war before the first of April, and great caution should prevail on your side not to give too high prices, counting on the certainty of war, for I cannot yet think, as many do, that it is inevitable. I will write to you by the Montano, to sail in a few days. The Hector is in the roads."

* * *

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 50—Howard st. Superfine, $7 25—fine do. $6 75—Wharf, do. $7—Wheat white, $1 50 to 1 55—Red do., 75 to 80 cts—Rye, 75 to 78 cents—Corn, 59 cents.—country Oats, 43 cents—Beef, 8 cents per pound—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per lb.—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $7 50 to 7—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $5—Millet, $2—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 18¾ cts. per doz.—Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts Chickens, $2 per doz.—Straw, $17 per ton—Hay, $10.

WHEAT.—Several cargoes of Wheat were sold yesterday at 155, 156, 157 and 158 cents per bushel.

MARYLAND TOBACCO.—Fine yellow, from $25 to 30—Yellow, 16 to 20—Fine red, 10 to 14—Common red, 4 to 7.

Prices of Seed at Philadelphia.—Herd's Grass of the best quality, $1 per bushel—Orchard Grass, $2—Timothy, $3—Clover, $6—Millet Hay at $18 per ton.

THE CELEBRATED HUNTER EMPEROR,

Imported four years ago, by Messrs. Tabb and Smith of Virginia, for the purpose of improving the breed of horses in our country, has been obtained by the subscriber, for the present season. This noble animal is a fine bay—with black legs, mane and tail—handsomely marked in the face, and possessed of all the points which constitute perfection in the most useful horse, viz. size, beauty, strength, activity, and spirit. It is, indeed, a rare thing, to see a horse of such ample proportions—and at the same time, so active and light in his movements.

Emperor will cover at $12 the spring's chance, $5 the single leap, and $20 to insure. The Groom will be entitled to 50 cents in each case.—It is indispensable, that the money be paid by the 10th of September, for every mare not insured—otherwise double the amount will be forfeited. The most satisfactory proofs have been received by the subscriber; which will be exhibited to any person having a desire to see them; that this horse is not only remarkably sure to get foals, but that they are superior, both for size and beauty. It is believed, that so favourable an opportunity to improve our stock of horses, in this state, will not again speedily occur—and gentlemen from the adjacent counties, and the Western Shore, will be accommodated with good pasturage, on moderate terms. Those who intend to breed from Emperor, will consult their own interests by applying in time—because he will be limited as to the number of mares, and to two stands, viz. at the stable of the subscriber, and at the town of Easton. It is a fact, that the excess to which this thing is carried—superadded to incessant travelling about, is two often attended with disappointment—frequent failures being the inevitable consequence.

N. GOLDSBOROUGH.

Otwell, Talbot County, March 22.

N. B. No mare will be considered insured, without a written agreement to that effect. If an insured mare be sold, or transferred, the insured price must be paid.

WANTS A SITUATION,

As an Overseer, a man who has a small family. He is acquainted with all the branches of Agriculture, as practised in England. Respectable references will be given. A line left at the Post Office directed to A. B. will be attended to.

AGENTS FOR THE AMERICAN FARMER.

☞ Complete sets of the first, second and third vols. of the "AMERICAN FARMER," new and corrected Editions, can be had of the following persons; price of which, bound, $5 per vol. or $4 in Sheets:—

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AGRICULTURAL.

Remarks on Ploughing, Planting, and Tillage; with some observations on the Drill Husbandry. Prepared by Gideon Davis, *Manufacturer. Georgetown, D. C. for the "*American Farmer.*"*

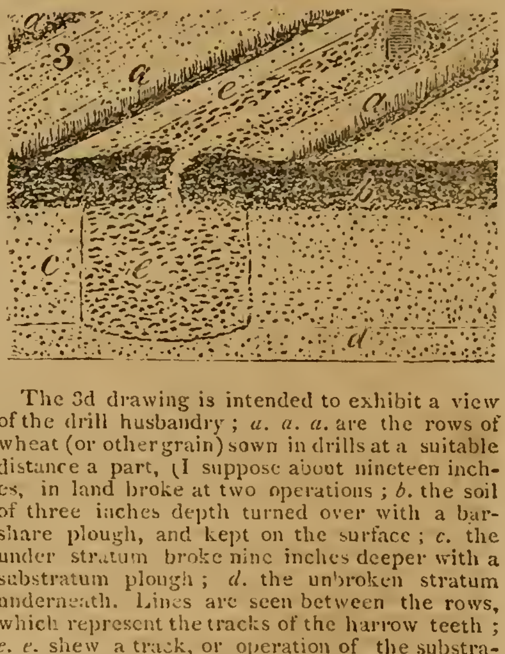
[CONCLUDED.]

PLANTING.—Say of corn, as being the most familiar. It is a practice with many, in laying off for corn, (or making the furrow to plant in) to plough tolerably deep, with a view, that the corn when planted down in that situation, will send forth its roots deeper, (than if planted shallow, or nearer the surface) that it will sustain a drought better, that it will derive more benefit in the course of its tillage, and that it will be less liable to be blown down by a storm. But if the husbandmen would make themselves acquainted with the nature of the case, they would find, that it matters not, whether they plant deep or shallow, the roots will run to their proper depth, and no deeper. That it is the heat, or influence of the atmosphere, that enables the seed to vegetate and grow; that if the seed is planted too deep, it will not vegetate at all, but rot in the ground, as much does; that when planted in a deep furrow, it is commonly covered with a poor clay, (or other stratum,) in which there is but very little vegetable food: of course it cannot produce a strong growth; and again, that this kind of clay or stratum, by the action of heat and moisture, is liable to adhere together, and bake or form a crust; through which, sometimes, the plant cannot force its way; and mostly, very unfavourable to the growth of the plant. They would become convinced, that in laying off for corn, it is best to make the furrow very shallow, and also, to cover the seed shallow, and above all to be particularly careful to cover the seed with the richest soil that can be obtained. That if covered with a rich soil, it will not bake, nor form a crust over it, that will hinder its coming up, or be unfavourable to the growth of the plant.

TILLAGE.—On this process there is much difference of opinion; some break their land deep, and cultivate the crop shallow; some break their land shallow, and cultivate the crop deep; some both break and cultivate deep, and others shallow. Formerly, in the cultivation of corn especially, it was considered, (by many, or perhaps most,) absolutely necessary to hill the plant. And as it is said, "that whatsoever the son seeth the father do, that he doeth," so in the present case, the hilling system still has many advocates. But they that will examine the case, will find objections to hilling in the tillage of corn, potatoes, &c. The first is, that when the plant sends forth its roots, they are fixed at a proper depth, and of course, if the plant is hilled, that set of roots will be covered too deep; they will cease to grow; and the plant must send forth another set of roots to obtain food necessary to its support, which, if the husbandman through kindness should hill the plant again, will cease to grow also, and the plant most send forth another set at a proper depth; thus at every process in hilling we hinder the growth of that set of roots then in operation; and no doubt, injure the growth of the plant. Another reason is, that when the ground is thrown into hills and hollows, in time of rains, the pulverised part being hilled up lays so much inclined, that the water cannot so well soak in, and the middle being an open furrow on hard earth, the water would incline to run off; so much so, that I believe, often times, there is complaint at drought when there had been moisture plenty, if the land had been so prepared and worked as to have retained it. Another objection to the hilling system is, that it leaves the ground very unpleasant in consequence of the hills and hollows. I believe, in the most perfect system, in the cultivation of summer crops, the first care should be, to keep the soil as completely on the surface as possible, and (in broken or hilly land) to keep the surface as even, or level as possible; and till the ground as deep as possible. I would say twelve inches deep; and even more than that if it could be done. When the soil is kept on the surface, though it is not more than one inch deep, it will prevent the ground from baking; in time of rain the water will soak through it, and by having the stratum underneath broke to sufficient depth, the land will absorb all the moisture, and entirely prevent washing; and, I believe, since my memory, would very nearly have prevented any complaint of drought. I conceive this to be a subject deserving of much attention, because it is an expensive operation.

DRILL HUSBANDRY.—It is said the drill husbandry originated, (or at least was found) with the North American Indians, in their manner of cultivating corn.—Tull, by some is called the father of it: he introduced the practise first in England.—Perhaps the celebrated Cooke, has profited most by it, because he has pursued it to the greatest extent. To that portion of the agricultural community, who have, and are turning their attention to the cultivation of small grain, this is a subject deserving much attention. It has been fully ascertained, that to raise the most perfect and profitable crop of small grain, (especially winter grain) it is just as absolutely necessary to cultivate it, as it is to cultivate maize corn, or other plants in order to ensure the most perfect and profitable crops of them. I believe that in the common mode of tillage, so far as I have been acquainted, land does not produce more than from one third to half as much wheat, as it will of corn; that if there was as much attention and labour bestowed in the tillage of wheat (and other small grain) as there is in the tillage of corn, land would produce quite as much wheat, as it will of corn—I saw an experiment made last year which convinced me fully, that with a suitable tillage it is possible, to make land of common quality yield from two to three times as much wheat as it will with the common management.

In the present process in cultivating wheat, there are several objections, manifest to every one that will examine the case; one is, that lands having but a thin soil, are commonly broke up too deep, the consequence is, that the soil is either buried too deep, or there is too much clay or other stratum mixed with it; in fact, the surface is too poor to mature a crop equal to the strength of the land. When wheat is sown on a surface of clay or other poor stratum, though it may come up quick and handsome, yet there cannot be a strong growth; such a result, it is not in the nature of things to expect to produce a strong growth of wheat: the surface must be composed of soil, (or a rich earth) let the under stratum be what it may. If the surface is composed of clay or other poor stratum, during winter the frost will draw the bulb of the root of wheat out of the ground, and the stool (or plant) will only be sustained by the small roots or fibres that will extend from it. Some seasons the wheat will remain a considerable time, much in the same situation, before it will become vigorous enough to send forth other roots, or shoots to assist in gaining the necessary food to support the plant; and especially, if the plant has a large family of the Hessian fly to maintain, because in that situation the fly (or rather the nit) would consume the sap about as fast as the roots could procure it, and sometimes faster, in which case the plant must perish, as we see many do. Perhaps much light may be thrown on this subject by explaining a circumstance, that I presume has not generally been taken notice of. The nit of the fly is found in the stool of wheat on the ground, but so near to the surface, that it may be said, they live between wind and water; and that it is their element exactly, because the greatest influence of the atmosphere is to be found there, and as the wheat grows they are raised up from the surface of the ground; or the probability is, that the heat would become so intense that they could not sustain it, and of course would perish. The fly being considered the greatest enemy to the growing of wheat, it is certainly a matter of much importance to find out some plan which would restrain their ravages. Now I believe it possible to pursue a process in the cultivation of wheat, that will prevent the depredations of the fly, perhaps entirely. We know that they live in the vegetable on the ground; that if they are put under the ground they must perish; because that is not their element; there they cannot exist: Then the secret is, bury them; this deserves the more to be recommended because it can be done, not only materially to the destruction of the fly, but greatly to the benefit of the wheat, and well worth the attention of the farmer when his wheat crop is not at all affected with the fly.



The 3d drawing is intended to exhibit a view of the drill husbandry; *a. a. a.* are the rows of wheat (or other grain) sown in drills at a suitable distance a part, (I suppose about nineteen inches, in land broke at two operations; *b.* the soil of three inches depth turned over with a barshare plough, and kept on the surface; *c.* the under stratum broke nine inches deeper with a substratum plough; *d.* the unbroken stratum underneath. Lines are seen between the rows, which represent the tracks of the harrow teeth; *e. e.* shew a track, or operation of the substratum plough in the tillage of wheat, for which use this plough is designed to be perfectly adapted; *f.* the leg of the plough in operation.

Now to effect this mode of tillage, I will propose what is certainly practical in the very worst case; say a stiff blue grass field; one man, one boy and three horses to perform the work. That whether for corn, or wheat, or any other grain, the first operation should be to apply the whole team of three horses to a very heavy strong harrow of about 32 inches in width, having nine very strong teeth, the harrow to be loaded so as to be a heavy draft for the team; then set to and harrow that very stiffest blue grass field, and cross harrow it; harrow it again, and then cross harrow it, until the blue grass and sod are both torn all to pieces, which will be found to be a cheap way of subduing blue grass, especially if the weather is very dry. Then put one horse to a small barshare plough and turn the soil, thus pulverised, completely over; this will bury the vegetable matter at a suitable depth for it to decompose most to the advantage of the soil, because the soil will receive and retain the vegetable matter as it is decomposed; if it is suffered to lie on top of the ground, much of it would be carried off by evaporation. This operation should be performed by the boy, because it would be the easiest; and there should be a strict watch kept over him that he should not plough but very little deeper than the soil, whether three inches, or only one in depth, this is a matter of very much importance. Then the man should take the two horses and substratum plough, follow the barshare in the same furrow, and use his endeavours to work the ground as deep as the team were able, which would vary very much according to the quality of the stratum for a crop of wheat; this may be done after harvest. Then harrow the ground lightly with a large harrow. Then with a small (or one horse) barshare plough lay off furrows very shallow at about nineteen inches distant, from centre to centre; this will lay the land completely in lists (or ridges)—then as soon as possible after the 20th of the 9th month, September, sow the wheat broad cast, 1½ bushels to the acre, and harrow it in lengthways with the laying off; the wheat will come up completely in drills, also in the hollows, having higher ground on either side, which, by the operation of the winter, will in some measure keep hilling the wheat; this will tend much towards keeping the bulb of the root under ground, in which situation the plants will be much more vigorous, than if that part is drawn out; and also destroy much of the fly by burying it. As soon as the ground has become settled in the spring, harrow it, either length or crosswise, as may seem best; and whenever it has become dry enough to be in suitable order, plough one furrow in each row with the substratum plough as deep as possible. And as it is seen that another operation with the harrow or plough would be of use to the crop, apply it. If tolerable wheat land was treated thus, there would be little or no complaint of the fly—of the hard winter—of the washing rain, or of drought—and above all, of the light crop. Land of common quality, treated in this way, would yield quite as many bushels of wheat per acre, it is believed, as it would of corn with the best tillage. For clover or other grass, so uncertain by the common mode of sowing the seed on a surface composed of clay, in the spring of the year, and among a crop of small grain, what could reasonably be expected? but that it would spring up, in the first moist growing weather, as it commonly does. And again, that as the season becomes dry and hot, and besides this, the ground sapped by the growing crop of grain, surely those tender plants of grass must be poorly provided for; of course they dwindle, they die; the consequence is, that the seed and labour of sowing it, are both lost, and most of the husbandmen still wonder why they cannot succeed in raising clover and other grass quite as tender when young; it is no wonder at all to me. Though I look back, and see that I have tread in those very same steps over and over again, and very much to my loss. But after having pursued the mode of preparing the land and cultivating the grain just described, the husbandman will go on, and after harvest, when his field has been gleaned by stock, turn in with his one horse plough and turn the soil over again, and follow after with his substratum plough urged by two horses, using his endeavours to pulverise the under stratum as deep as possible.—Then in the 8th month, August, sow about one bushel of oats or one peck of buckwheat per acre, and harrow it in, then sow the clover or other grass seed on the surface, thus treated, and harrow it again. Then look at the result. The land worked to a great depth, with the soil at the surface having the stubble and other vegetable matter, (if any) mixed with it, so as to render it as loose as it can be made, well adapted to the nursing of tender roots. That when the clover or grass comes up, the oats, or buckwheat will come up also, and during hot weather protect it from the sun, and when frost comes, it will prostrate itself and protect the grass from the frost. In the ensuing spring we may expect to see that field make a rich appearance indeed. But it will be said, this costs a great deal of labour; but without this labour we cannot expect to reap a plentiful harvest. This is my present belief, resulting from experience, and observation, which is submitted—with again urging the use of the small, strong, heavy harrow, in destroying the blue grass sod, that powerful enemy to the growth of wheat and clover; this harrow will be found just as much preferable to the scarifier, as it is stronger and cheaper.

At the request of my friend Gideon Davis, and for the use of the Agricultural part of the community: This is to certify, that in breaking my land for corn last spring, (about 60 acres) I followed the barshare plough, with a substratum plough, until I had broke about 25 acres.—I believe the average depth of my ploughing with the barshare was about five inches. That the substratum plough worked about seven inches deeper, in the same furrow; making the whole depth twelve inches. That otherwise, in the planting and tillage, the management was just the same, and the land of about equal quality throughout the field. That, the corn on that part where the substratum plough was used, grew about twelve inches taller, kept its colour through the season; and produced at least fifty per cent. more corn. That the corn on the other part of the field, suffered very much with the drought; and fired considerably.

JOSEPH DELAPLANE.

February 18th, 1823,
Montgomery County, Md.

FROM NICHOLSON'S ENCYCLOPEDIA.

CULTIVATION OF HOPS.

The hop planters esteem the richest and strongest ground, the most proper; and if it is rocky within two or three feet of the surface, the hops will prosper well; but they will by no means thrive on a stiff clay or *spongy wet land. Hops require to be planted in a situation so open as that the air may freely pass round and between them, to dry up and dissipate the moisture, whereby they will not be so subject to fire blasts, which often destroy the middle of large plantations, while the outsides remain unhurt. The hills should be †eight or nine feet asunder, that the air may pass freely through them. If the ground is intended to be ploughed with horses between the hills, it will be best to plant them in squares, chequerwise; but if the ground is so small, that it may be done with the breast-plough or spade, the holes should be ranged in a quincus form. Which way soever you make use of, a stake should be stuck down at all the places where the hills are to be made. Persons ought to be very curious in the choice of the plants as to the kind of hop; for if the hop-garden is planted with a mixture of several sorts of hops, that ripen at several times, it will cause a great deal of trouble, and be a great detriment to the owner.

The two best sorts are the white, and the grey bind, the latter is a large square hop, more hardy, and is the more plentiful bearer, and ripens later than the former.

There is another sort of the white bind, which ripens a week or ten days before the common, but this is tenderer and a less plentiful bearer, but it has this advantage, that it comes first to market.‡ If there is a sort of hop you value, and would increase plants and sets from, the superfluous binds may be laid down, when the hops are tied, cutting off the tops, and burying them in the hill; or when the hops are dressed, all the cuttings may be saved, for almost every part will grow and become a good set the next spring. As to the manner of planting the sets, there should be five good sets planted in every hill, one in the middle, and the rest round about sloping. Let these be pressed close with the hand, and covered with fine earth, and a stick should be placed on each side the hill to secure it. When the hop ground is dug in January or February, the earth about the hills, and very near them, ought to be taken away with a spade, that you may come the more conveniently at the stock to cut it. About the end of February, if the hops were planted the spring before, or if the ground is weak, they ought to be dressed, in dry weather; but else, if the ground is strong and in perfection, the middle of March will be a good time; and the latter end of March, if it is apt to produce over rank binds; or the beginning of April, may be soon enough. Then having with an iron picker, cleared away all the earth out of the hills, so as to clear the stock, to the principal roots, with a sharp knife you must cut off all the shoots which grow up with the bind the last year; and also all the young suckers, that none be left to run in the alley and weaken the hill. It will be proper to cut one part of the stock lower than the other, and also to cut that part low, that was left highest the preceding year. In dressing those hops, that have been planted the year before, you ought to cut off both the dead tops, and the young suckers which have sprung up from the sets, and also to cover the stocks with fine earth, a finger's length in thickness. About the middle of April the hops are to be poled, when the shoots begin to sprout up; the poles must be set to the hills deep into the ground, with a square iron picker or crow, that they may the better endure the winds—three poles are sufficient for one hill. These should be placed as near the hill as may be, with their bending tops turned outwards from the hill, to prevent the binds from entangling; and a space between two poles ought to be left open to the south to admit the sun beams.

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* *If some spongy wet land is laid dry by either open or hollow drains, it will bear the best hops.*

† *Many hops are planted in Kent and Sussex, at six and a half feet each way, with five sets to a hill as described—and four poles are used to each hill.*

‡ *There are a number of different sorts, known by the following names in Kent and Sussex.*

1*st*. *The Golden.—They are productive and early, if planted on a fine dry deep mellow soil.*

2*d*. *Early Grape.—Answers on a loamy soil, they are hardy and productive.*

3*d*. *Backward do.—Suit a stronger soil, they are hardy and productive.*

4*th*. *Ruffler.—Are a coarse sort, are early and answer on strong land*

5*th*. *Old Canterbury.—Require land similar to the Golden.*

As to the tying of hops, the buds that do not clasp of themselves to the nearest pole when they are grown to three or four feet high, must be guided to it by the hand, turning them to the sun, whose course they will always follow. They must be bound with withered rushes, but not so close as to prevent them from climbing up the pole. This you must continue to do till all the poles are furnished with binds, of which two or three are enough for a pole, and all the sprouts, and binds that you have no occasion for, are to be plucked up, but if the ground is young, then none of those useless binds should be plucked up, but should be wrapped up together in the middle of the hill. About the beginning of July, the hops begin to blow, and will be ready to gather about Bartholomew tide. A judgment may be made of their ripeness by their strong scent, their hardness, and the brownish colour of their seed. When by these tokens they appear to be ripe, they must be picked with all the expedition possible; for if at this time a storm of wind should come, it would do them great damage, by breaking the branches, and bruising and discolouring the hops; and it is well known that hops, being picked green and bright, will sell for one-third more than those that are discoloured and brown.

The most convenient way of picking them, is into a large square frame of wood, called a bin, with a cloth hanging on tenter hooks, within it, to receive the hops as they are picked. The best method of drying hops, is with charcoal on an oast or kiln, covered with hair cloth, of the same form and fashion that is used for drying malt.—The hops must be spread even upon the oast, a foot thick or more, if the depth of the curb will allow it; but care is to be taken not to overload the oast if the hops are green or wet. The oast ought to be first warmed with a fire before the hops are laid on, and then an even steady fire must be kept under them; it must not be too fierce at first, lest it scorch the hops; nor must it be suffered to sink or slacken, but rather be increased till the hops are nearly dryed, lest the moisture or sweat, which the fire has raised, fall back or discolour them. § When they have lain about nine hours, they must be turned, and in two or three hours more, they may be taken off the oast. It may be known when they are well dried, by the brittleness of the stalks, and the easy falling off of the hop leaves.‖ As soon as the hops are taken off the kiln, lay them in a room for three ¶ weeks or a month to cool, give and toughen; for if they are bagged immediately they will powder, but if they lie a while (and the longer they lie, the better, provided they are covered close with blankets to secure them from the air,) they may be bagged with more safety, as not being liable to be broken to powder in treading, the better and the harder they are trodden, the better they will keep.

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§ *After the hops have been put upon the oast about half an hour, rolls of Brimstone are put upon the fire—quantity in proportion to the colour of the hops, from half a pound to a pound and a half.*

‖ *As soon as they are taken off the oast they ought to be sifted through a sieve, with openings about an inch square, to take out the stalks and the hops, that are not sufficiently dryed.*

¶ *They are generally bagged sooner in the above counties than recommended in this account, viz. in less than 48 hours, if thoroughly cool.*

FOR THE AMERICAN FARMER.

NAKED BARLEY.

Long Meadow, March 14th, 1823.

JOHN S. SKINNER, ESQ.

I procured from a friend in 1821, a few grains of Naked Barley,* which I have carefully cultivated, and intended to enquire its value, through the medium of the Farmer, but on the receipt of No. 46, Vol. 4, I got the information desired.

Mine was a small experiment; in 1821, I planted 50 grains, on the 15th April, and made 5 gills. In 1822. I made from those 5 gills, one bushel and three quarts, weighing 63 lbs. per bushel. It was planted 13th April, (too late,) and cut 28th June. I think it is a very early productive grain, and will give the small quantity I have, a fair trial this season, sown broad cast.

This is a trifling affair to trouble you with, and by many it may be thought unworthy of attention, but it is by this kind of attention, that we acquire a knowledge of the value of any plant.

Farmers are frequently imposed on, by those who first offer rare seeds for sale, and I generally make experiments on a small scale; if I find the article not valuable, or curious, I discard it; for instance, the Helligoland bean was puffed off, as a very valuable field bean, producing very abundantly. I procured two pints, which cost me two dollars, (at the rate of sixty-four dollars per bushel.) I planted them carefully, in good ground, expecting to make enough to plant an acre or two, but was disappointed; I planted them two years, and concluded I had been imposed on. It is not necessary to give the character of this bean, as I believe all who have planted it, have discarded it; I think it is worthless in the extreme, but I speak only from my own knowledge; it may have succeeded better with others. I could name a number of other seeds, I have planted, and discarded as unprofitable. But when experiments are made on a small scale, the expense is trifling, and although we may be frequently disappointed, we are sometimes gratified in the result; but it does not appear, that the properties of the Naked Barley, has been ascertained here, and it may possibly turn out to be a valuable grain to cultivate.†

Although the large class of Farmers, *the renters of land*, are not generally experimenters, there are a great number of intelligent, wealthy persevering agriculturists, excited by the spirit now prevailing, who are making direct attacks upon old prejudices and systems, which may result in lasting benefits to the country. And it is by the exertions of those aided in their communications, by the agricultural societies, and the periodical agricultural publications, that the spirit of improvement will increase—your paper, as a vehicle of communication, is doing its full part.

But, sir, improvement will be gradual. It is almost impossible to persuade, or drive the old three field farmers of Maryland, from their rotation of crops, which have been pursued by their ancestors for many generations.

I have been farming twenty-four years, and have sometimes made pretty good crops; for instance, I have had 25 bushels of wheat per acre, for a field; this was the greatest quantity of straw I ever saw, on so much ground; but it was, in spots, very much injured by the rust, or the quantity of grain would have been greater, I have had 85 bushels of wheat off two acres.—I have had six stacks of Lawler wheat off six acres, which were generally estimated to be large enough for 40 or 45 bushels per stack, but the straw was very long, and it is a kind of wheat that does not yield well from the stack, and I had but 23 bushels per stack. I have had 50 bushels of oats per acre, and as good crops of corn as my neighbours, say sometimes 30 bushels per acre; I have had 30 bushels of corn, 33 cart loads of pumpkins, and five loads of cymblins, off five acres planted in rows, alternately: I have had three tons of herd grass hay per acre, and very frequently, very fine crops of clover; I have never weighed the produce of an acre of clover, when cured, but I one year, secured 627 cart loads. I have had upwards of 300 lbs. flax per acre; barley has never succeeded with me, ruta baga and potatoes, I have cultivated with great attention, but I have never made a great crop of either, and although I have made tolerable crops of all those articles, I have sometimes made very indifferent ones. But when I compare those products, (and some of them are pretty good,) with the eastern crops, as published in the Farmer, say 72 bushels winter, 44 bushels spring wheat, 84 bushels oats, 130 bushels corn, upwards of 600 lbs. flax, 60 bushels barley, 48 bushels rye, from 6 to 800 bushels ruta baga, potatoes, and mangle wurtzel, &c. per acre, I am astonished at the difference, and am willing to acknowledge myself a novice at the business.

The crops I notice, as having made myself, are not to be considered as the general produce of my land. Far from it; they are parts of the best crops I have ever made, and compared with my general crops, and those of my neighbours, of two barrels of corn, per thousand hills, and from six to ten bushels of wheat, for one sown, proves that our lands are capable of much higher improvement, and although I am considerably advanced in years, I hope yet to improve by the examples set before me, and the information derived from the experience of others.

A.

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* The Barley mentioned by our correspondent A, is of the same kind, with that we noticed in No. 46, Vol. 4, as having been cultivated by Captain Hall, of Harford county, Md. some of which has since been brought to Baltimore for sale as per advertisement, on the last page of No. 48. We believe that this variety of Barley, will be found more profitable to the farmer, than the kinds usually cultivated, and very probably be more desirable than these to our brewers.—*Edit. Am. Farmer.*

† It is perhaps more incumbent on us to *report* when the result is unfavourable, than when it is promising—where is the benefit of experiments, if the result be not made known? What would we say of the Pilot, who being wrecked upon an unknown shoal or rock, would refuse to anchor a buoy as a signal of danger to his brother mariner? Yet we fear it is too much the fashion to *suppress a knowledge of failures* in cases of new and unsuccessful processes.—*Edit. Am. Farmer.*

FOR THE AMERICAN FARMER.

ALBION'S 4th LETTER TO HIS SON.

——— The country wins me still;
I never fram'd a wish, or form'd a plan,
That flatter'd me with hopes of earthly bliss,
But there I laid the scene.

In the 3d letter I gave you some hints respecting sheep, and now I propose giving you a description of the Albion farm—from the plan which you have had of this farm, it may be seen, that numbers one to ten inclusive, being one half part of the same, was arable land, cultivated on a regular and an unchangeable system of cropping, and the remaining half part, was old pasture and meadow ground, which had not been ploughed for, at least, a century: indeed, to plough this ground, and particularly that part in pasture, would reduce its value at least one half, as it would require another century to recover the mischief done by the plough.

Through the centre of the farm, from north to south, ran, with a gradual fall, a stream of water, sufficiently large to turn a small mill, and the east and west sides of the farm had a gentle fall into this stream, so that the whole farm formed a valley, looking towards the south.

When this property was first inclosed into fields, the proprietor had in view the present system of management, and divided the arable part accordingly into ten fields of 30 acres each, so that by following a ten-field system, no field had two kinds of cropping in it at the same time—each field, on the whole farm was inclosed by a white thorn hedge, and a ditch three feet deep, and three and a half feet wide at the top, on the side of the fence most exposed to the stock, or else on the side where it would the more readily take off the superfluous water; these fences were kept good at so little expense, by plashing and scouring out the ditches, that they were a source of profit to the tenant, as they furnished him with — faggots for farm yard shelters, wattled fences, and fire wood.

The highest ends of the arable fields, were, originally, of a brown, loose, sandy soil, intermixed with some small flint stones, and the lower ends of them were of much the same kind of soil, but very wet, occasioned by the under strata of all the arable fields, which lay from nine to twelve inches below the surface, being a very solid white clay, similar in appearance to pipe clay, but in some parts it was of the nature of marl, which might be ascertained by putting it into strong vinegar, when it would ferment like yeast—but by sough or under draining all the wet parts of these fields, and ploughing the whole of them in autumn, with a very strong plough, and four huge horses, some of the white clay was turned up, and where this could not be effected by the plough, the mattock and shovel were employed, until the whole surface was well covered with the under strata, which occasioned a vast improvement.

The grass ground was one half part of the farm, and had a surface of brown sandy clay, resting on an under strata of dark lead coloured clay, particularly greasy and tough, and quite impervious to wet; this ground was originally too wet, but by sough or under draining the wet parts, and sinking the ditches round the pastures, the whole was made sufficiently dry, and became very valuable ground for breeding and feeding stock, being covered with a herbage consisting of rough stalked meadow, or orchard grass, smooth stalked meadow, sheeps fescue, sweet vernal, meadow catstail, or timothy, rib grass, white clover, cow grass, and a vast number of other grasses, which altogether formed a most beautiful smooth verdure, and particularly so in the autumn, winter, and spring—a short time after the sward dresser had been passed over it—one hundred and twenty acres of this grass ground, could be, at any season of the year, covered with water, one half of which was meadowed, and the other half pastured alternately.

By turning to the plan, you may see the directions of the artificial water courses, which were made to convey water to these grounds—these cuts were exactly on a level, from one end of them to the other, and had no outfall at the south end; and all the soil, taken out in forming them, was placed on the *top* side, next the arable land, so that when a pair of draw gates were let down, which were placed at the top end of the original water course, all the water was forced into the artificial cuts, and having no other way to escape, flowed regularly over their level sides into the meadow, from one end to the other, covering the surface two or three inches deep—where the water was interrupted by small cuts, running nearly parallel with the main feeders, and like them exactly level; these cuts were repeated, so often as the water appeared inclined to collect together, in order that it might be carried regularly over the whole surface of each piece of ground, when it fell into the original water course, where it turned a mill, that thrashed and ground all the grain, and at the same time cut all the hay and straw eaten by all the stock on the farm.

The buildings on the farm, were all of brick, and covered with welch slate; the barn adjoined the mill, the stables, sheds and other buildings adjoined the barn; and the thrashing machine was turned by water.

The house was three stories high, and had two sitting rooms 14 by 16 feet—servant's hall, kitchen and back kitchen each, 14 by 20 feet—in the latter was a complete set of brewing utensils, where two hogsheads of ale, and an equal quantity of beer could be made at a brewing, and water was conveyed by lead pipes into the kitchens, stables, sheds and foldyards, the whole being planned with a view to save manual labour as much as possible.

ALBION.

FROM THE WINYAW INTELLIGENCER.

Stateburgh, *S. C. Jan.* 1823.

Sir,—I enclose you some further observations and experiments made by Dr. Bracey upon the rot in cotton the last year, which taken with those made by him in 1821,* will, I think, settle the question so long agitated about its origin. A committee of the Claremont Agricultural Society, appointed to select such pieces for publication as are presented to it, and thought to be the most interesting and worthy of public notice, have requested me to send you Dr. Bracey's for insertion in your useful paper.

With sentiments of respect, I am, Sir, your's, &c.

EXPERIMENTS ON THE ROT.

BY DR. XENOPHON J. BRACEY.

In a small detached field of about 15 acres, I had the stalks and trash of the preceding year's cotton collected and burned. The seed were then soaked 24 hours in a strong solution of salt and water, and carefully rolled in fresh wood ashes, and planted in beds in the usual manner. In another field, I had the fibres of cotton burned off the seed by setting fire to the heap, stirring it briskly, so as to destroy effectually all eggs &c. these were also soaked in brine, and rolled in lime. These preparatory steps gave me a good stand, and vigorous growth when young—but early in the month of August, the rot had made a formidable appearence in both these fields, the cotton was very forward on account of the seed, having been procured from the extreme part of North Carolina, bordering on Tennessee. I enveloped several plants, with gauze entirely, first clearing away every appearance of larva, egg, or insect; I then covered several limbs, containing many pods on them, in all about a dozen, under three of the gauze sacks, I placed some insects* and rendered them, as well as all the others, inaccessible by close tying around the body of the plant. The envelope remained until nearly the whole of the pods opened, or about the last of September,—in the course of which time, much of the adjoining cotton rotted, the season having been uncommonly wet. Notwithstanding, I could not discover a puncture, or even the slightest appearance of rot on any one of the pods so protected, except the three plants which had insects placed within the covering, nearly every pod rotted on those, or were materially injured by frequent punctures—I am certain that the whole would have rotted had not a few days dry weather intervened, which saved 14 pods out of 52, the aggregate number on the three plants. There were about 170 pods on the other plants enveloped, which looked larger than those around, and were entirely free from the black specks observable on all unprotected cotton—and I am fully impressed with the belief, that they yielded more cotton, though I did not weigh them to test the fact. One of the insects under one of the coverings produced about 40 young ones in the latter part of August, and they were able to produce rot about 6 days after. This circumstance induced me to collect about a dozen insects, and place them under three tumblers, dividing them equally. I fed them daily with fresh pods of green seed cotton, for a week; they all appeared healthy, and punctured the pod, about every two hours for sustenance, during the night as well as day—I then fed those under one of the tumblers with black seed pods, and continued the green seed to the others; at the end of another week, all under the glass fed with black seed cotton died, the others continued healthy, and seemed to feed rather oftener than at first. In the course of a few days after, I found, upon changing the pods, that one of them which had been under the glass 24 hours, had a number of eggs on it, which I carefully preserved, by returning it under the covering, and placed a cotton leaf under the other glass. Two days after I found the leaf almost covered with eggs, which hatched in four days. I then had an innumerable brood of small black insects which collected in groups on different parts of the pod, giving them an ulcerated appearance. I was obliged to sweep them off carefully with a feather in order to renew their daily food. In the course of two or three days, they began to assume a greenish cast, and gradually developed all the appearances, which has been described on a former occasion.

I wish therefore to correct conjectures formed the last year in regard to their manner of propagation. The egg certainly brings forth the insect, and it speedily matures, without undergoing any change except in size and colour. How often they multiply their species in the course of the year, I am unable to say, but believe it to be more than once?—The matured insect probably undergoes a change at the approach of winter, but as yet I have not been enabled to detect it. It is not material whether it does undergo a change or not; the object of this research has been directed, in ascertaining fully the cause of rot, by which means we might be enabled to come also at the remedy—but so far as my researches go, the remedy seems removed, if possible, to a greater distance; such as have been heretofore recommended, are at least, perfectly ineffectual—and the only one which now holds out to be really successful, is planting together alternate rows of black and green seed cotton. This plan has succeeded in two fields in which it was planted this year; perhaps from the dislike the insects have to the black seed the intermixture deceives and confuses them—by which means they are driven from the field.

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* *See Winyaw Intelligencer of January, 2d,* 1822.

* *Genus, Cimex Linn. Species, Velox, as it is believed*

From the Farmers' Messenger.

SIGNS OF A POOR FARMER.

He grazes his mowing land late in the fall, and his pastures early in the spring, and consequently ruins both. Some of his cows are much past their prime. He neglects to keep the dung and the ground from the sills of his buildings; and it costs him twenty dollars to make repairs when one dollar's worth of work would have been sufficient if performed at leisure time ten years before. He sows and plants his land until it is exhausted before he thinks of manuring. He has generally too much stock, and many of them unruly. He is almost sure to have a good-deal of stake and pole fence. He says that he cannot arm it for want of money: this is frequently the case with good farmers, but you may know a sloven by his inattention to little things—his children's shoes are spoiled for want of shoe strings to tie them, or for want of a little tallow to supple them—his door hinge comes off for want of a nail, and the door is destroyed for want of a hinge, and his mow is trampled on and cattle gored for want of a door; and all this loss is occasioned by not timely driving and clenching a single nail. Nothing is in order—he has a place for nothing, and nothing in its place. If he wants a gimblet, a chissel, or a hammer, he hunts up chamber, out at the barn and corn-house, in the cupboard, and lastly when he has spent more time in pursuit than it takes him to do the job, he finds it down cellar. He keeps no stock of the smallest things: if a button or a bail to a pail gives way, or a key to a yoke, or a pin to a sled, or a helve to an axe, a string or a swingle to a flail, or even a tooth to a rake, he has none to replace them. He seldom does any thing in stormy weather, or in an evening, and is sure to keep no memorandum of little jobs that are to be done. You will perhaps hear of his groaning about the hardness of the times frequently in a bar room. Death and the tax-gatherer he knows must come; yet he makes no provisions for either of them. Although he has been on a piece of good land for twenty years, ask him for a grafted apple, and he will tell you that he could not raise them for he *never had no luck*. His indolence and carelessness subject him to *many accidents*.—He looses soap or cider for want of a hoop—in the midst of his busy ploughing, his plough breaks because it was not housed; and when he is reaping away from home his hogs break into his garden for want of an additional board. He does not take the advantage of his business by driving it when he can, and consequently he is like the old woman's son, "so busy that he never does any thing;" or at least he seldom finishes one thing before he begins another, and therefore brings little to pass, and is often to be seen in a great hurry. He is seldom neat in his person, and will sit down to table without combing his hair, and suffer his children to do so without washing their hands and faces. He frequently drives his cattle with a club, and is generally late to publick worship. His children are also apt to be late to school, and their books are torn and dirty. He is careless; his children and domestics are so too. As he has no enterprise, so he is sure to have no money. If he must have money, he frequently makes great sacrifices to get it; and as he is slack in his payments, and buys altogether on credit, he pays through the nose for every thing. His want of forethought, economy, and exertion makes him poor, and his poverty tendeth to poverty. You will generally see the smoke begin to come out of his chimney long after day light in winter. His horse stable is not daily cleaned out, or his horse littered and curried.—Boards, shingles, and clapboards are to be seen off his buildings month after month, without being re-placed. He feeds his hogs with whole grain and suffers them to be much injured for want of a warm bed and warm pen; he seems to live without thinking; if his lambs die, or the wool comes off his sheep, he does not seem to think that it is for want of care and food. He is generally a troublesome borrower, and frequently forgets to return the thing which he has borrowed.

In a word, a poor farmer in the strict sense of the word; is a poor creature—he is a poor husband, a poor father, a poor neighbour and a poor citizen. A good farmer may be poor, but a poor farmer cannot act his part well: in other words, he cannot be good as a man or as a christian.

A.

PUMPKIN SEED OIL.

To the President of the Hampsire, Franklin and Hampden Agricultural Society.

Dear Sir—As a member of your Society, I deem it to be my duty to communicate to you the result of an experiment that I have made on Pumpkin seeds, in the Linseed Oil Mill.

A number of my neighbors furnished me this year with seeds, which, together with my own, made about nine bushels, and on making the experiment, I found that they produced about six gallons of oil, and probably when the experiment is tried upon a large scale, they will produce more. I tried the oil on the screw of the Oil Press, and find that it answers an equal purpose, to prevent friction as sweet oil, and of course it will be good to use on the axletrees of carriages that are made of iron, either alone, or mixed with tar, to prevent friction. I have also tried it in the lamp, and find it to be as inflammable as lamp oil, and without the offensive smell of that oil; and the light emitted from it is of a greenish yellow tinge and is easier to the eyes, and, especially, when reflected from white paper, than the weak glimmering light of a candle, and of course the light is easier to read or write by, and especially to weak eyes.

I have been informed by gentlemen of medical skill, that the seeds of pumpkins have so great a tendency to promote urine in animals, as to render them unfavourable to their health; and a neighbor of mine informed me that his geese became so relaxed as to be unable to go, by eating pumpkin seeds.—*These* circumstances induced me this season to cut open my pumpkins, and take out the seeds before I gave them to my cattle, and I found by the experiment last fall, and the beginning of winter, that my horned cattle, sheep, and swine derived the greatest benefit with the least expense to myself of any thing that ever I tried in the agricultural line. And from the little experience that I have had as a farmer, I am induced to think, that there is no one article that is cultivated, from which so much advantage can be obtained, by so little labour, as from the cultivation, and right use of the pumpkin. It is probable that the oil of pumpkin seeds may be made a complete substitute for tallow; and when it is once introduced into use it will probably be worth at least $1.50 per gallon. Children can with the greatest ease take out the seeds when the pumpkin is cut open, with a spoon or their hands, and spread them on a floor where they will soon dry; and it is proper that they should be preserved clean, and without being suffered to mould. In the United States, where there is such an unbounded region of land, and labour above the price of produce, the main object of the farmer ought not to be the obtaining of the greatest quantity of produce, from the best piece of land, as in many places in old countries which are so crowded with population as almost to be in a state of starvation, and labor of no consequence; but the obtaining of the greatest quantity from the least labor and expense, taken together. I have no idea that fields appropriated exclusively to pumpkins would be profitable like those of corn and pumpkins planted together; for if they be planted too thick they are an inconsiderable damage to each other. There ought not probably to be more then one pumpkin suffered to grow to twenty hills of corn, otherwise they are apt to choke the growth of the corn, and not produce so many or so good pumpkins either. It costs scarce any more labor to raise corn and pumpkins in the same field than it does to cultivate it exclusively for corn, and perhaps the crop is worth a third more. On the whole, I am inclined to think that this subject is worth your notice.

I am yours, &c.

Respectfully,
JOSIAH WHITE.

Northampton, March 17, 1820.

NAVAL OFFICERS.

The attention of the officers of our navy to the arts, sciences, improvements, valuable products and curiosities of the different parts of the world which they visit, has often been mentioned with the approbation that it deserves. It seems as if they generally felt themselves bound to bring home something that might gratify or benefit their fellow citizens. A late instance is thus noticed in our Baltimore papers—

"Captain *C. G. Ridgely* has presented to the University of Maryland, for the museum, a collection of minerals, formed during his late visit to South America, and which includes several of the most interesting productions of Peru and Chili, principally from their gold and silver mines. Capt. R. has also presented, with other general curiosities, a couple of specimens of earthen ware, found near the tombs of the Incas, which shew that considerable skill in the art of pottery existed among the ancient Peruvians. These specimens, when compared with the fragments of similar works found in the western states, may, possibly, throw some light on the probable history of the civilized tribes who appear once to have inhabited that portion of our continent."

We may add, that capt. *Spence*, of the navy, has forwarded to us "a sketch of Spanish continental America," showing the various establishments therein, up to the year 1810, the epocha of the revolution. It makes three folio pages, of elegant penmanship, displayed in the most pleasing manner, with the judgment of an experienced statistical writer. We cannot copy this into the REGISTER so as to do justice to the original; and, from the great changes that have taken place, it would not afford much of that sort of information about those regions which the people are most interested just now in obtaining: but we are not the less thankful, on that account, to capt. Spence for his interesting compliment.

Niles' Register.

An English publication observes, that "seeds when not sufficiently ripe, will swim, but when arrived at full maturity, they will be found uniformly to fall to the bottom; a fact that is said to hold equally true of all seeds."

FROM THE FEDERAL REPUBLICAN.

A Statement of the crop of Maryland Tobacco, the growth of 1821, and the Exports of the same in 1822.

Date of Clearance.	Vessels' Names.	*Amsterdam.*	*Rotterdam.*	*Bremen.*	*Hamburg.*	*London.*	*Cowes and a Market.*	*Boston.*	Total.
1822, Jan. 26	Ann		278						
Feb. 6	Hibernia		437						
2	Athens		728						
20	Rolla	629							
"	Pallas	543							
"	Brunswick			454					
Mar. 16	Wabash			395					
22	Mandarin	430							
23	Philip	450							
"	Unity		84						
25	Thomas Gibbons			226					
26	William		506						
May 1	Edward	407							
2	Graff Zinzendorff			167					
6	Brig Agile							130	
9	Governor Griswold		487						
10	London Packet	448							
14	Lady Munroe				52				
June 5	Edward Foster		202						
10	Dumfries			414					
13	Nestor	340							
20	Janus			400					
27	Frederick		285						
28	Herman			311					
July 16	Wabash			391					
"	Henry Clay		481						
19	Plato						338		
22	Rolla	595							
30	Virgin	317							
"	Milford		375						
31	Brunswick			377					
Aug. 1	Hibernia				231				
3	Philip	282							
"	Fabius					305			
12	Jason	401							
13	William Penn	491							
"	Jupiter			408					
Sep. 4	Wachsamkeit			396					
11	Mary		502						
21	General Lingan			467					
Oct. 4	Edward		287						
18	Arathusa		497						
19	Thomas Gibbons			349					
24	Massassoit	253							
Nov. 7	Eagle	132							
4	London Packet		461						
22	Balloon		337						
27	Edward Foster		180						
Dec. 3	Emma				347				
4	Philip	380							
		6098	6127	4749	630	305	338	130	18,377 hhds.
	From George Town and Alexandria.								
1822, Mar. 20	Repeater	350							
April 2	Eagle						735		
10	General Lingan	593							
May 1	Hope			223					
July 1	Wilhelmina		499						
10	Delta	550							
12	Ventrossa						350		
"	Midas			300					
29	Neva			367					
Aug. 3	Virginia						432		
13	Abigail			435					
17	Eight Sons	363							
20	Eagle			731					
Sep. 3	Marquis of Anglesea						243		
10	Medford	431							
20	Grampus			370					
Oct. 20	Ann		329						
Nov. 18	Ulysses						654		
Dec. 12	Halcyon						361		
31	America	399							
		2686	828	2425			2775		8715 hhds.

RECAPITULATION.

From Baltimore to Amsterdam,	6098	
Do. do. Rotterdam,	6127	
Do. do. Bremen,	4749	
Do. do. Hamburg,	630	
Do. do. Cowes & Market	338	
Do. do. London,	305	
Do. do. Boston,	130—	18377
Do. the District to Amsterdam,	2686	
Do. do. Rotterdam,	828	
Do. do. Bremen,	2426	
Do. do. Cowes & Market	2775—	8715
Number of hhds. Maryland Tobacco shipped from 1st January to 31st December, 1822.		27092
To which add what remained in the state on the 1st January, 1823, viz:		
In the Warehouses in Baltimore,	8456	
On board of four vessels then loading,	924	
In the Warehouses on the Potomac, including Bladensburg—estimated number,	2250	
In the Warehouses on the Patuxent and Bay-side up to the Severn—estimated number,	1750—	13380
		40472
Deduct what remained in the state the 1st January, 1822, viz:		
In the Warehouses in Baltimore,	5070	
On Board the ship Athens, loaded in December, 1821, & not cleared on the 1st of the following month,	728	
In the Warehouses on Potomac including Bladensburg, as ascertained to be,	1240	
In the Warehouses on Patuxent and Bay-side up to the Severn—estimated number,	1200—	8238
Which makes the Crop of Maryland Tobacco, the growth of 1821, to be	hhds.	32234

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PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE.

November 19.—Stated Meeting. The President In the Chair.

A Communication was read from Mr. James Williams of Philadelphia County, dated November 18, accompanied by several specimens of Ruta Baga Turnip, Mangel Wurzel, Table Beet, and Carrots all of a very large size. The Mangel Wurzel of his crop averaged four pounds each; several weighed 8 or 9 lbs. some 10 lbs and measuring 16 to 22 inches in circumference. Some of the Table Beet measured nearly as much as the Mangel Wurzel. Many of the Carrots weighed between 2 and 3 lbs. and several measured near the crown from 9 to 11 inches round, and averaged about one pound. One quarter of an acre produced 87 bushels, equal to about 10 tons per acre. The Mangel Wurzel yielded at the rate of 400 bushels, or 12 tons per acre. The soil was not favourable to the cultivation of tap roots. These valuable crops were cultivated with the horse hoe-plough, invented by Mr. Williams, and tried before several members of the Agricultural Society at their exhibition in June last, to their decided approbation, as stated in the Report. He thinks that with it, and in a proper soil, 20 tons of either of the roots mentioned may be obtained, or 50 bushels of Indian corn with the same labour, could be gathered. Considering the extremely dry weather during the last season, the size of the roots and the quantity yielded by the land of Mr. Williams was considerable, and shows the good effects of good cultivation with a proper tool, even under unfavourable circumstances of soil and season.—Crops, equally good, if not superior to that of Mr. Williams, were raised this year, by Mr. Walker, Washington Village, Philadelphia County; and by Mr. Joshua Gilpin, on a very elevated spot of ground back of Wilmington, Delaware. The drill system was pursued in both instances, and the land properly prepared. The uncommon fine and late autumn, enabled Mr. Gilpin to put in a crop of wheat after his turnips were pulled.

Mr. James Vaux attended the society, and exhibited a stem of a young apple tree perforated in various places above ground, but not extending to the branches, nor descending to the roots. The stem being sawn into blocks, and connected by a wire running through their centres, showed the depredations of the insect fully. Several hundred apple trees in the orchards in Philadelphia County, from which this specimen came, have been killed by these insects. Farmers should examine their young trees frequently, and with an awl or other pointed tool, or iron ware, destroy the insects by perforating the puncture made by them. The holes ought to be filled with thick lime wash, to keep out the rain and prevent future attacks in the same places.

Specimens of very large French Chesnuts, in the burrs, the growth of the present year, from Mr. Shallcross, of Hope Farm, near Wilmington, Delaware, were shown. The roots producing the tree from which they were taken, was planted in the year 1806, and bore fruit for the first time in the year 1816. The nuts came from France. In 1820, one nut selected from a burr containing two others, weighed 20 dwt. 6 grs.—The other two were of a large size No fruit-bearing tree offers greater inducements to the farmer to plant than these large Chesnuts. In the south of France, in Spain and Italy they constitute the principal part of the diet of the labouring class of people in the country. The trees may be obtained from some of the American Nurserymen.

In the third volume of the Memoirs of the Philadelphia Society for promoting Agriculture, may be seen a paper on the engrafting of the Chesnut tree, by a mode pursued in France, called "pipe or ring grafting," and on the profit of an orchard of these trees.—*Union.*

FROM THE ALBANY ARGUS.

ON THE CULTURE OF PEAS.

The pea is a native of the southern parts of Europe, and is found growing spontaneously in the western parts of our own continent. The family is a large one, containing several species; but of these the *field pea* alone comes within the scope of our present purpose. Of this, there are two varieties, denominated from their colour, the grey and the green; both productive, and (when separated from the skin that surrounds them) a food of excellent quality for man; wholesome, nutritive and pleasant: and for cattle, whether in a dry or green state, much to be recommended. Sheep, cows and horses are particularly fond of them; and hogs are more promptly and economically fattened on a mixture of pea and barley meal, in a state of accetus fermentation, than by any other food.

The structure of the roots would indicate, that peas are an exhausting crop; and it is on this evidence, that in Europe they are admitted only in long, or six years rotations, but if we examine the leaves, in regard to both number and form, we will probably find reason to modify this opinion, and allow, that by stifling weeds, by checking evaporation, and eventually by their own fall, they meliorate the soil and render it more favourable to subsequent crops.

Following turnips, the preparatory labour for a pea crop, is not great. One, or at most two ploughings, will be sufficient. Sowing, as a general rule, ought to follow ploughing, without loss of time; and care should be taken, that the seed be not laid too deeply. The two methods, row and broad cast sowing, may be indifferently pursued By the former, the seed is economised, the product increased, and the soil better tilled; but not, as some have supposed with such decided advantage as to outweigh the saving, in time and labour, of the latter.

The length and feebleness of the stems of peas and the little tendrils they throw out for support, indicate the advantage of mixing with them other plants of more erect growth, which may prevent the peas from falling and lodging. For this purpose, rye, oats and beans have been selected, and with great advantage.

This crop is employed either in a dry or in a green state; between which every farmer will select, according to circumstances. If the market for peas be brisk and high, he will in harvest, thresh and sell the grain; if, on the other hand, peas are low and pork high, the moment the pods fill, he will turn in his hogs upon them, and with the following advantages: 1st, the hogs feed and fatten themselves, without any additional interposition of his labour; 2d, no particle of their manure is lost; 3d, the *debris* of the crop, refused by the hogs, is given back to the soil; and 4th, the rooting of thsee animals, which in other cases is an injury, is in this a benefit.

INVENTION OF AN IMPROVED TREAD MILL.

Mr. Richmond, who is engineer to the gas works here, and whose mechanical inventions so evidently point out his just ideas of the principles of mechanics, lately exhibited through the medium of Mr. Hopper, the County Surveyor, to the magistrates assembled at the Shire-hall, the model of an improved Tread Wheel. It was desirable that the motion of the tread wheel should be accelerated at pleasure, without the necessity of the connexion of the flour mill; and that it should likewise be made applicable to the punishment of any lesser or greater number of prisoners. Another object was also sought, that of making it more or less laborious, so as to apportion it to the delinquency and sentences of the parties put to work. The mills already erected are generally upon the principle of revolving 120 times in an hour, or twice in a minute. The present improvement will enable the governor of a prison to regulate the velocity to his own desires; to make the labour easy or oppressive, and all this without the necessity of connecting the works with machinery for grinding; or it may be converted to any such use, at discretion. The model itself must have required much time, as it is finished in the most complete manner. This improved mill moves with a triangular action; having levers and weights; the balls attached to which regulate the opening and shutting of flyers which are attached, so as to increase or decrease the weight upon the centre, and by that means render the labour greater or less. The simplicity of the movements will tend much to protect it from a probability of frequent defect. The Bench were much pleased with the production, and expressed their approbation in very flattering terms to Mr. Richmond for the ingenuity of his invention, and the peculiarly clear manner in which he had illustrated it by his model. We have heard some observations as to the propriety of the speculation which the county has been driven into in order to afford labour; and whether it produced loss or gain was not a consideration; the quantity of flour manufactured, the complainants say, is thrown into the market, and has its weight in the depression of the article; whilst a capital is necessarily employed out of the county purse; it will therefore be accomplishing a most important object as regards the public, and give infinite satisfaction to the magistrates of counties, if labour can be found, even without profit, as such was never the object so much sought; the prevention of loss being the grand desideratum. Mr. Richmond's improvements promise to produce such results, and we sincerely hope he will reap his merited reward. As a proof of the manner in which the project was received, a tread mill, with such improvements, was directed to be put up, without loss of time, in Halsted Bridewell. The idea of the tread mill is of Chinese origin, in which country they are used for drawing water, &c. An index, or sort of clock, nick named a *tell-tale*, is proposed to be affixed to the new mill, by which the Governor can ascertain the number of revolutions in a given time, whether he may be present or not.
—*Chelmsford Chronicle.*

Editorial Correspondence.

ANGOLA PEA.

Sir—The Abbe Raynal, in his 11th book,[*] speaks of an Angola Pea. It grows to the height of four feet, lives four years, and its fruit (a Pea,) is highly nourishing. It is useful in Medicine and Surgery; and grows in the most barren parts of the West Indies. Will any of your readers give us an idea on the subject, as it is probable it *may be* highly useful in the Southern States.

A SOUTH CAROLINIAN.

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[*] *Raynal, London edition, 8vo. 1778, p. 475.*

HOW TO PROCURE A NURSERY OF YOUNG LOCUSTS.

Hills, Ohio County, Va. March 22, 1823.

I have had great success in raising the Black Locust tree, (Robinia pseud acacia,) from the seed, for many years, until last spring, when I nearly met with a total failure. A knowledge of the circumstances under which this happened, may be of service to some of your readers.

On the 29th of March, I, as usual, placed my seeds into a small vessel, and poured boiling water upon them. Those that floated were thrown away. When the temperature of the water had descended to that of the atmosphere, I poured it off of the seed, and dropped them into a drill, made by drawing the end of the handle of a rake, along the prepared ground, with a little pressure. The earth, thus pushed out of the drill, was brought back over the seed, which covered them from three-fourths to an inch deep.

The morning was fine and warm, for the season, but it became cold in the afternoon, and continued so through the night. Next morning, the surface of the ground, nearly, if not quite down to the seed, was frozen.

On the 26th of April, the young plants began to appear. I think, about a fifth of the seed did not vegetate. This was a much greater loss than I had ever before experienced. Indeed, in all my former trials, I believe that every sound seed put into the ground germinated.

Some time in May, about the 20th I think, we had a slight frost, which killed all my young locusts, except about a half dozen. I lost from 140 to 150.

It would seem from this, that the seed ought either to be sown later, or the young plants protected, on frosty nights.

Receive my good wishes,

LAW. A. WASHINGTON.

MR. JOHN S. SKINNER.

A QUESTION.

Said Lady Bab, to Lady Sue;
"I wish I were as blessed as you—
Your husband is polite and kind,
Of gentle manners—generous mind—
Obliging, gay—in friendship warm,
With every quality to charm."
"Pray Lady Bab," cried Lady Sue,
"How came my husband—entre nous,
"So *intimately known to you*."

THE FARMER.

BALTIMORE, FRIDAY, APRIL 4, 1823.

FINE BEEF.

In the stall of Mr. James Elmore on Saturday last, we had the satisfaction to see a display of beef, which for its quality, and the neatness with which it was dressed and handled, has never been excelled in any country. This superb lot of cattle, reflected credit on the breeder, the grazier, and the victualler; and, for one, we can say, from trial, afforded particular pleasure tn—the consumers.

It is to be regretted, that the particulars, as to live and dead weight, comparative weight of offal, tallow and nett butcher's meat, were not more minutely ascertained, because after all, it is in a comparison of these particulars, and the age, that we arrive at what is called the "proof" and profitableness of the animal.

The weight as ascertained were—the Bakewell bullock, bred by Gen. Ridgely, and fatted by Mr. Farney, of Port Penn—1306 pounds, at five years old—he was extremely fat, for that age, and would have attained great weight, in two years more. The bullock, of Gen. Ridgely's celebrated Dutch stock, also fatted by Mr. Barney, weighed 1405. Mr. Isaac Clements' Teeswater bullock, 1351—his Holstein bullock, 1230, and his cow of the Porter breed, 914. The fine Maryland bullock; bred and fed by Mr. Pearce, rising six years, weighed 1541—and a spayed heifer, in beautiful condition, gave 643 pounds

We have much pleasure in adding, that our citizens appreciated properly, the policy of giving prompt encouragement to the taste, skill and labour, of those who, with Mr. Elmore, thus contributed to the credit of our market, for, we understand, that the whole lot, making 8390 pounds, was sold at very liberal prices, at an early hour of the day, on which it was exhibited.

SEED RECEIVED FOR DISTRIBUTION, SINCE LAST NOTICE.

Warley Peas—Seawright Peas—Dea's Peas—from Dr. John S. Bellinger, Barnwell district, South Carolina.

Guinea Corn—and Snap Bean for table use—from J. Dozier, Summerville, South Carolina.

Millet seed, from Wm. Coxe, Burlington, N. J.

Varinas, or Spanish Tobacco seed, from V. Maxy, Esq. Annapolis, Md.

Corn raised in Ohio, by the Waugh-paugh-connetta tribe of Indians, presented to the Editor, by Thomas Ellicott, Jr. with the following note

"Herewith you will receive an ear of Indian Squaw Corn, the seed of which I obtained whilst in the State of Ohio, and was raised by the Waugh-paugh-connetta Tribe.

"The above seed I had planted, and it proved to be very superior for Roasting ears, and about four weeks earlier than such as is in common use, and generally bearing from five to seven ears on each stock.

"N. B. They yield about 50 per cent. more than any other.

WAR—*and its effects on the price of produce.*

Since our last the prospect of war in Europe increases. The King of England in his speech to parliament, says—"Faithful to the principles which his Majesty has promulgated to the world, as constituting the rule of his conduct, his Majesty declined being party to any proceedings at Verona, which could be deemed an interference in the internal concerns of Spain on the part of Foreign Powers. And his Majesty has since used, and continues to use, his most anxious endeavours and good offices to allay the irritation unhappily subsisting between the French and Spanish Governments; and to avert, if possible the calamity of war between France and Spain."

The French House of Deputies in reply to the King, say amongst other things *equally true*, and honorable—"By concerting with the Holy See measures which are about to restore to the churches the pastors of whom the revolution had deprived them, your Majesty has provided for the *first want of your people*, and consolidated social order on its long convulsed basis.

"Sire, to preserve Spain from imminent ruin, the consequences of which would be fatal to our own tranquility, you have summoned to arms 100,000 Frenchmen; at their head marches a prince of your family; of that august family *always prodigal of its blood, when its glory and ours are at stake*. [A good one!] Such an army is worthy of having for its chief a prince of tried valor; his virtues form the true pledge which your Majesty presents to the *people* whom you wish to *deliver*; to the people whom it is offered a salutary support, to assist them in finally escaping from the anarchy which devours them, in guaranteeing, at the same time their own happiness and the repose of nations, under the protection of institutions freely emanating from the *legitimate authority*. [Meaning the King.]

"It belonged to your Majesty alone to determine on the greatest questions of war and peace. This function of the high perogative confided to you by Providence, you have exercised with that deliberation which such grave circumstances demand."

THE KING OF THE DONS SAYS TO HIS CORTES.

"*Messieurs Deputies*—I have received with lively satisfaction the message which the Extraordinary Cortes addressed to me on the 11th inst. and, perceiving in it the conformity of their sentiments with my own, I, anew, congratulated myself upon being placed at the head of a nation which so many qualities distinguish. The sentiments of honour and national independence, so profoundly rooted in the hearts of Spaniards, offer me the securest guarantee that the existing political institutions, the object of their predictions will continue unalterable, notwithstanding the efforts of their most violent enemies How, in this respect, can I entertain the slightest doubt, when I am witness of the effusion of the patriotic sentiments and generous resolutions which will render the sitting of the Congress on the 9th and 11th of this month eternally memorable? Those days have shown gentlemen, what a nation is capable of when the conformity of elevated sentiments gives so generous an impulsion to confidence. They are the most positive and most eloquent answers to the calumnious imputation with which the communications of foreign cabinets are filled, and which have excited the surrprise and indignation of the Extraordinary Cortes. Nations will at once see the free manifestation of my sentiments and principles, they will be convinced that the constitutional King of the Spains enjoys the free exercise of all the rights vested in him by the fundamental code, they will form an exact idea of the true origin of the disorders which afflict the country. The sacrifices which, under these circumstances, the honour and independence of the state require will be cheerfully made, for nothing is considered too great a sacrifice by a nation habituated to suffer, and to hear no other cry than that of liberty and honour. For myself, convinced more and more of the imperious necessity, that all the children of this great family should assemble round the constitutional throne, I will steadily follow the route which my duty prescribes to me; and, if the spectacle of a nation destined to defend her independence and laws do not restrain those who meditate to invade her, I will place myself at her head, certain of victory in the most just of causes, which is at the same time that of all the free nations of the earth."

(Signed) "FERDINAND.

"At the Palace, Jan. 11, 1823."

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 50—Howard st. Superfine, $7 25—fine do. $6 75—Wharf, do. $7 to 7 12½—Wheat white, $1 55 to 1 60—Red do., $1 50 to 1 55—Rye, 75 to 78 cts.—Corn, 56 to 57 cts.—country Oats, 43 cents—Beef, 8 cents per pound—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $5—Millet, $3 to 4 50—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 18¾ cts. per doz.—Turkeys, 75 cts. to $1—Geese, 37½ to 50 cts. Chickens, $2 per doz.—Hay, $17 per ton—Straw, $10.

MARYLAND TOBACCO.—Fine yellow, from $25 to 30—Yellow, 16 to 20—Fine red, 10 to 14—Common red, 4 to 7.

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MANUFACTURES.

[COMMUNICATED FOR PUBLICATION IN THE AMERICAN FARMER.]

To the Honourable the Senate and House of Representatives of the United States in Congress assembled.

THE MEMORIAL

Of the Board of Manufactures of the Pennsylvania Society for the encouragement of American Manufactures.

Respectfully sheweth,

That it is with extreme reluctance we feel constrained by a sense of duty to ourselves and to our common country, to undertake to prove, that the existing tariff of the United States is unjust, oppressive, partial, and impolitic; and loudly calls for a radical revision and correction.

I. *We believe it unjust and oppressive—*

Because it taxes necessaries of life most exorbitantly high, some of them used exclusively by the poor, and admits at low duties, comforts, conveniences, and luxuries, used chiefly and some of them exclusively by the rich.

If this be proved, as we hope will be the case, we fondly flatter ourselves, that enlightened citizens of all classes, paying due regard to their own honour, and that of their country, will not only not oppose a revision and correction of it, but unite in the accomplishment of that object.

The duty on molasses is about 42 per cent.—on bohea tea, 120—on souchong, 150—on brown sugar, 100—and on salt about 180. These are all necessaries of life. Three of them are used exclusively by the poor, and, according to the practice of wise nations, and the dictates of reason, common sense, and justice, ought to be admitted at low duties. The rich, deriving far more advantage than the poor, from the protection of government, and being able to contribute incomparably more in proportion to their means, ought to be taxed accordingly. It would therefore be unjust, even were the duties equal on both. What decision then must be passed on a system which taxes the poor ten, fifteen, and twenty fold higher than the rich, as will appear clear as the noon-day sun from the following detail? Gold and silver plate, jewels, lace, lace veils, watches, &c. pay but 7½ per cent. duty—clocks, silks, satins, cambric linens, bombazets, tartan plaids, gauzes, and Canton crapes, but 15—china, elegant cutlery, girandoles, and lustres, but 20—and plated ware, fine muslins, calicoes, kerseymere, broad cloth, Cashmere and merino shawls, Brussels carpets, &c. &c. but 25.

We respectfully solicit your most serious consideration to this exhibit—being persuaded that the tariff of no nation in the civilized world affords a more striking picture of oppression of the poor—partiality to the rich—or violation of the fundamental principles of sound legislation. It appears that 100 dollars worth of salt pays as much duty as 720 dollars worth of Brussels carpets—900 dollars worth of girandoles or porcelain—or 2400 dollars worth of plate!

II. *The tariff is partial in the extreme.*

A wealthy sugar planter, with an annual income of 3, 4, 5, or 10,000 dollars, is, as appears above, protected in his bulky staple, of which the freight is very high, by a duty of 100 per cent.—the tobacco planter by duties all but prohibitory—the cotton planter by a duty of 37½ per cent.—and the farmer by a duty of 33 per cent. on hemp—150 per cent. on cheese—and by duties averaging about 100 per cent. on foreign spirits, to protect him in the market for his grain for distillation, and in the sale of his rye and apple whiskey and peach brandy—while all manufactures of flax are admitted at 15 per cent.—the great mass of those of iron, steel, brass, lead, tin, pewter, china, pottery, and stone at 20 per cent—and manufactures of cotton, (at or above 25 cents per square yard,) wool, and copper at 25 per cent.

We respectfully invite your attention to the preceding view—and feel confident that the extreme partiality of these features of the tariff will not be controverted.

III. *The tariff is manifestly impolitic.*

It is a maxim in political economy, consonant with the practice of the wisest statesmen, to admit raw materials, whereon the industry of a nation may be employed, and whereby its wealth and prosperity may be promoted, either absolutely duty free, or on easy terms. This maxim we have ourselves adopted in parts of our tariff, witness hides, furs, block-tin, &c. imported duty free. But in other cases, the duty on the cumbersome raw material is equal and in some nearly double that of the manufactured article.—Flax falls under the first description—cotton and hemp, under the second. Flax, which, from its bulk, is subject to considerable freight, pays 15 per cent. Linens of every kind, fine and coarse, Russia diapers, damasks, thread stockings, and all other articles made of flax, as above stated pay only the same duty. Cotton pay s 37½ per cent. duty. Whereas cotton stockings pay but 20—and fine manufactures of cotton 25. Hemp pays a duty equal to 33 per cent. But hempen cloth, (except Russia and German linens, Russia and Holland duck,) pays only 20—Russia duck 16—and Ravensduck 25 per cent. To this part of our system, there are two equally strong objections. It is as partial as impolitic.

We now proceed to notice some of the objections to an alteration of the tariff.

I. *Extortion.*

The clamour raised, and the hostility and other angry passions excited against the manufacturers, in 1816, for alleged extortion during the war, which was the principal cause of their being abandoned in the succeeding years to the ruin in which they were overwhelmed, requires serious consideration, as the same feelings and prejudices still prevail in certain quarters, generating jealousy and alienation between fellow citizens, who having one common interest, ought to regard each other with kindly sentiments.—We hope to prove the accusation undeserving of notice. We single out, (as has been frequently done heretofore in vain,) the article of superfine broad cloth, which is a fair example. Other articles will stand or fall with it. That species of cloth was sold before the war for seven or eight dollars—and was raised during the war to twelve, thirteen and fourteen. This was regarded as an instance of base extortion, and was the grand foundation of the obloquy then cast on manufacturers. But the fact was never brought into notice, that Merino wool was sold previously to the war at 75 cents per lb.—and raised in 1814 to three and four dollars! The extortion, if any, was therefore on the part of the sellers of the wool—and not on that of the manufacturers of the cloth—as it is susceptible of complete demonstration, that the per centage of profit was less on the high than on the low priced cloth.

But this accusation could not come with the least propriety from any other class of society—as at that period they all enhanced their prices in proportion as the demand rose. The merchants on the declaration of war, raised the prices of foreign articles, in many cases, 60, 70, and 100 per cent. In the year 1816, when, as we have, stated, this clamour was excited, and when its operation was so severely felt, agricultural products underwent a great rise. In 1814, cotton was 13 cents per lb.—in 1816, it rose to 27—In 1815, wheat was 125 cents per bushel—in 1816, it rose to 175. But the case of tobacco is far more strong and striking, and entitled to more weight, from the consideration that among the most ardent accusers of the manufacturers, were to be found some prominent citizens almost wholly engaged in tobacco planting. Tobacco in 1815 according to the treasury returns, was only $96 per hhd. whereas it rose in 1816 to $185. This is a rise, which, under no circumstances, has ever taken place with manufactures, and must settle the question for ever in the mind of every honorable member of society.

II. "*Trade will regulate itself.*" "*Let us alone.*" "*It is wrong for government to interfere with private pursuits or capital.*" "*Capital will always find its most beneficial mode of employment.*"

Whenever application has been made to congress for an increase of the duties on imported merchandise, Chambers of Commerce in different cities have used great exertions to prevent success—and have presented petitions, memorials and remonstrances against the measure, on the ground that "*trade would regulate itself*"—that "*it ought to be let alone.*" This course, we are sorry to say, for the honour of our country, was pursued with great zeal and ardour even in the years 1817, 18, and 19, when desolation and destruction pursued the manufacturers, who were in vain struggling under all the disadvantages of inexperience, want of skill, and slender capitals—and when nothing was wanting but the powerful protection of the government, to foster their establishments to a maturity of strength which would bid defiance to foreign rivalship.—Yet by a strange inconsistency, these very Chambers of Commerce were seen, sometimes in the same session, praying for counteractions, restrictions, and exclusions of foreign tonnage, as well as for special favours for "*the regulation of trade.*" Our statute book abounds with acts of the most exclusive and restrictive character in favour of our merchants—always sought for when in any way necessary—and always granted when sought for. The second act passed by congress at its first session had this object in view—and it has never been lost sight of since. We are therefore warranted in saying, that "*let-us-alone,*" in the mercantile language, strictly means to let the merchants import and export whatever may suit their purposes how pernicious soever it may be to the general welfare, or to the industry or happiness of any class of their fellow citizens. But when their interests require it, the "*let-us-alone policy*" is laid aside—and the government is loudly called on to interfere for their protection. We instance, from the great mass of laws of this description, the law respecting plaster of Paris—and those to counteract the colonial laws of Great Britain, and the navigation laws of France. We would ask, and it would be found difficult, without condemning this policy, to give a satisfactory reply—Why the importation of ships should not be allowed at low duties, to destroy the art of ship building, and blast the fortunes of the shipowners, as well as that of cottons or woollens, to ruin the proprietors of cotton and woollen manufactories? With what propriety or consistency did the same Chambers of Commerce that solicited the government to force Great Britain to relax her colonial system for their advantage, use all their efforts to debar their fellow citizens from a small addition to the duty on goods of which the importation was effecting their destruction? Why, in one word, should one species of industry and one class of citizens be protected by every kind of restric tion that can be devised, and another species and class be subjected to the overwhelming competition of foreign rivals?

We beg leave briefly to state, that every nation in the civilized world, except Holland and the United States, imposes heavy duties on, or actually prohibits, such articles as interfere with or destroy the domestic industry of the country.—The four greatest nations in Europe, Great Britain, France, Russia, and Austria, have systems abounding with various restrictions. France prohibits manufactures of steel, brass, copper, woollen cloths, wove cotton goods, cotton yarn, watches, clocks, &c. &c. The prohibitions in the Russian tariff amount to three hundred and ten articles, embracing the important manufactures of iron, brass, steel, copper, wool, leather, silver, glass, flax, hemp, and cotton. England prohibits altogether a variety of articles, and imposes a duty of 172 per cent. on printed linens—104 on linen sails—80 on glass—75 on china, earthen ware, and manufactures of leather, skins and furs. Seventy or eighty enumerated articles, and all that are not enumerated. pay 50 per cent.

Spain, Portugal, Prussia, Denmark, Sardinia, Sweden, Mexico, and Peru, pursue the same system. The latter subjects to double duties, "*such articles as directly prejudice the industry* "*of the country—such as ready made clothes,* "*white and coloured leather, boots, shoes, chairs,* "*sofas, tables, commodes, coaches, calashes, saddles, and other manufactures of harness, ironmongery, wax, spermaciti, and tallow candles.*"

It cannot possibly be supposed that we possess more wisdom, and have devised a more perfect system than the oldest and most prosperous nations in the world.

But if we refuse to profit by the salutary lessons and examples of the rest of the civilized world, it would be unwise not to profit by our own melancholy experience. We wish to recal to your recollection the awful scenes of 1784, 5, 6, 7, and 8, when intense suffering and distress stalked through the land—when tender, and appraisement, and stop laws disgraced and dishonoured the statute books of one-half the states in the union—when civil war raised its bold front in Massachusetts—and when our citizens were disposed to doubt whether all the boasted blessings of the revolution, were not likely to vanish "*like the baseless fabric of a vision.*"

To what was this shocking state of things owing? To extravagant importations of foreign goods alone, whereby we were drained of our specie, a general paralysis produced, and property of every kind was sacrificed at one-half, one-third, or one-fourth of its former value. The merchants who were then, as now, in favour of the "*let-us-alone policy,*" suffered in the general wreck with the rest of the community

If from that dreadful period, we direct our eyes to the disastrous years 1816, 1817, 1818, and 1819, when so much distress pervaded the land, we find the same causes and the same effects.—We find that to the extravagant importations of 1815 and 1816, nearly the whole of the sufferings of the country may be as fairly traced as any effect whatever to its proximate cause. Those importations exceeded our means of payment by our natural productions. The balance was paid in specie. The banks were drained—all of them obliged to press on their customers—and no small number to suspend specie payments altogether—and thus bankruptcy and ruin swallowed up thousands of our citizens, particularly in 1819. In this case, as in the former, the mercantile class largely shared in the general disasters.

To the consequences of the enormous importations of the present year, we look with the most serious apprehension. They so far exceed the amount of the export of our productions, that although we have remitted of government and United States' bank stock, exclusive of stocks of various other kind, within the year above $4,500,000—and exported 6 or 7,000,000 of specie more than we imported—we still have not by some millions met the demands of Europe on us for the fiscal year recently closed.

It is an important truth, demanding the most serious and solemn consideration, that by those extravagant importations, we hold specie payments, so vitally important to the character, the morals, the happiness, and the prosperity of the country, by a very precarius tenure.—Whenever importation greatly exceeds exportation, the balance must be paid in specie: and when that payment goes to the extent it reached in 1784, and 5 and in 1815, 16, 17, and 18, the consequences in all future times, as in times past, must necessarily be tremendous.

To our fatal experience of the ruinous consequences of extravagant importations, and the necessity of controlling them by legislative interposition, we can add that of Russia and Holland, which ought at once to preclude all controversy on this subject, and to settle the question without appeal. Russia, which had prospered for a series of years, under the restrictive system, made a total change early in 1820, abrogating its prohibitions and greatly reducing its duties. The consequence during 1820 and 1821, were fatal to its industry, happiness, wealth and prosperity, which were most dreadfully impaired. The limits of a memorial prohibit entering into detail—and we shall only quote the pithy statement of the Russian government, dated March 23, 1822, when the "*let-us-alone policy*" was wholly renounced —"*Agriculture without a market—industry without protection—languished and declined. Specie was exported. And the most solid commercial houses were shaken.*" The whole invaluable document may be seen in our gazettes.

The facts of this case are immensely important —and ought never for a moment to be disregarded by our statesmen. Narrow and illiberal views of this grand subject, have assumed an hostility between the different classes of society, and supposed that the promotion of the prosperity of manufactures, by protecting duties, would be pernicious to agriculture and commerce. Nothing can possibly be more foreign from the truth. Their interests are identified. It is impossible that so great a national branch of industry, as that of the manufacturing class, can prosper or decay, without the other branches enjoying a portion of the prosperity or suffering a portion of the decay. In confirmation of this plain theory, Russia found, as we have found by our own fatal experience, that although by opening the flood gates to foreign merchandise, and *buying goods where they could be had cheapest*, manufactures and manufacturers may be the first to suffer, yet agriculture and commerce ultimately partake equally in the disastrous consequences.

Holland is at present writhing under the consequences of the "*let-us-alone policy.*" Her tariff bears the same date as ours, 1816. It imposes very light duties. Since its operation commenced, her finances have failed—her industry is paralized—real estate has fallen throughout the kingdom, (except at the Hague and in Brussels,) one-third—and one-ninth part of the population of the most industrious country in the world is actually dependent on public support for a living.

In every other science, but polical economy, when a theory is broached, it is according to the dictates of reason and common sense, subjected to the test of experiment—and if it cannot pass this ordeal, it is abandoned. It is melancholy to reflect, that in the grand science of promoting the happiness and prosperity of nations, this sound procedure is wholly abandoned; and that so many of our most estimable citizens, yielding themselves to plausible but delusive theories, shut their eyes to the deleterious consequences produced in Spain, Portugal, Ireland, Poland, Russia, and the United States, by the "*let-us-alone policy*"—as well as to the incalculable benefits derived by Great Britain and France, and the vast additions to their "*wealth, power and resources*" from the restrictive system.

III. *The injustice of taxing the many for the benefit of the few.*

This phrase has been so often reiterated, that many of our citizens are impressed with an opinion that the manufacturers are but a "*few,*" and form a very "insignificant" part of the community. In an address recently delivered by a member of an agricultural society, which has memorialized congress against the applications of the manufacturers, they have been styled "*the* "*most insignificant and inconsiderable interest in* "*this nation!!*" We deeply regret the use of such harsh language, so wholly unlooked for, so wholly unfounded, and so well calculated to excite irritation and retalliation. The orator must have been ignorant of the fact, that this "*most insignificant and inconsiderable interest*" actually comprises, in the eleven old states, from Maine to Maryland inclusive 1,064.742 souls, being 22 per cent. of 4,839,738, the total population of those states; and about 1,349,000 in the whole union, being about one-seventh of its aggregate population. The manufacturers "purchase from their agricultural fellow citizens all the animal food—all the bread stuffs—four-fifths of the drinks—all the timber, except mahogany —one-third of the sugar—and ninety-nine parts in one hundred of the tobacco, which they consume. Moreover, all the flax, all the hemp, all the wool, all the hides, all the skins, and all the furs furnished by our fields and forests, find a ready market in the workshops" of this "*insignificant interest,*" who are thus ignominiously held up to the contempt of their fellow citizens. In one word, the market this "*caste*" affords its agricultural brethren, is. six fold greater than the markets of all the world besides, and not subject to the destructive fluctuations of foreign markets.

IV. *The dangers of monopoly.*

It is asserted that protecting duties will afford the manufacturers a monopoly—and enable and induce them to impose on the public by charging exorbitant prices. There cannot be any monopoly in this country. There is no power to grant one. Every species of industry, of whatever kind it may be, is open to every citizen without exception. It has been conclusively observed on this subject by one of our greatest statesmen—"When a domestic manufacture has attained to "perfection, and has engaged in the prosecution "of it a competent number of persons, *it invariably becomes cheaper* [than the foreign article.] "The internal competition which takes place, "soon does away every thing like a monopoly, "and by degrees *reduces the price of the article* "*to the minimum of a reasonable profit on the capital employed.*" But we are not to depend on theory. We have the most satisfactory experience on the subject. The objection is set at rest by the experience of the duties on yarn, coarse cottons and nails. These duties are very nearly prohibitory—and, so far from realizing the gloomy anticipations of the consequences of prohibitory duties—those articles are furnished of better quality and cheaper than they were when foreign rivals enjoyed the market.

V. *It will destroy the revenue.*

Our demands for the productions of Europe will increase with our population and our prosperity—and the tariff may, without difficulty, be so far modified, that the increased duties on the articles which we must continue to import, will amply compensate for any deficiencies that may arise from the diminution of other articles, for which our citizens will provide substitutes.—Silks and linens, neither of which are at present manufactured here to any extent, would afford an addition to our revenues, of probably one million of dollars. A variety of other articles might be pointed out, which would admit of additional duties. For a long time we cannot supply ourselves fully with cottons or woollens. It cannot be doubted that an addition to the existing duties of 12½ or 15 per cent. on what we must continue to import, would amply compensate for the defalcation of the amount resulting from an increase of the domestic production.

VI. *The danger of smuggling.*

On this point very few observations will suffice. We impose 80, 90, 100, and 150 per cent. on teas, sugar, wines, and spirits, without any apprehension of smuggling. It is, therefore, highly incorrect, to magnify the danger of smuggling, to deter congress from imposing duties of 30, 35, or 40 per cent. on manufactures. There is no body of merchants in the world more fair or honourable than ours—and it is a libel on them to suppose the existence of this danger.

Most of the observations we have hitherto offered, partake of a local or sectional character, merely to meet and obviate sectional prejudices. But it does the subject great and manifest injustice, not to consider it on a grand national scale, so far as it affects the interests of a rising empire. We will now present one feature of our policy, predicated on the national importance of this subject.

We have probably exported this year 135,000,000 lbs. of upland cotton. At 8 pence sterling per lb. which is the average of the year in Liverpool, it amounted to £4,500,000 or about $20,000,000.—Had we manufactured 35,000,000 lbs. additional—and the increase in value by the manufacture been but four-fold,* it would amount to about $20,000,000, the actual amount of the whole crop, leaving a national gain of about $15,000,000 for rent, wear and tear of materials, wages of labour, and profit of capital. And from the luminous circular letter of Cropper, Benson & Co. recently published, and the actual state of the production of cotton in all the countries where it is cultivated, as well as the great increase of consumption, there is no doubt that the residue would have produced as much as the whole has done. The price abroad has fallen by excess of exportation.† Nothing but a decrease is likely to raise it. And nothing but extending the domestic consumption can produce this decrease.—The interests therefore of the cotton planter and cotton manufacturer are indissolubly identified—and the general prosperity, wealth, power, and resources of the nation materially depend on the regulation of our policy with a steady eye to this identity. Cropper, Benson & Co. expressly state that by a decrease of the exportation, our planters "*might sell their cotton at any price.*"—What an important field for reflexion on the immense advantages presented to us by bounteous nature, which we lavish for the support of foreign industry and foreign governments! These considerations might be advantageously extended to various other branches of our industry.

We could make large additions to this memorial—but we hope we have adduced sufficient reasons to prove, as we stated, that the tariff is unjust, oppressive, partial, and impolitic—and requires complete correction.

All which is respectfully submitted.

Philadelphia, December 30th, 1822.

Signed by order of the board,
WILLIAM TILGHMAN,
President of the Pennsylvania Society for the encouragement of American Manufactures.

Attest.
HENRY HORN, *Sec. pro tem.*

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* Very recent accounts from Great Britain warrant the belief that the increase is 7 or 8 fold. The exports of cotton goods from Great Britain this year are about £23,000,000 or above $100,000,000.*

† *The average price in Liverpool in* 1819 *was* 15½ *pence sterling. That year there were only* 205,000 *bales imported from this country. The next year the importation was* 300,000 *bales, and the price fell to* 13d. *In* 1821, *the importation continued at* 300,000 *bales—and the price fell to* 11d. *This year the quantity increased considerably, and the price has fallen to an average of* 8d. *These are facts which cannot be too seriously considered by our statesmen.*

ANECDOTES OF DRESS IN THE LAST CENTURY.

The love of *novelty*, it has been truly observed, is the parent of Fashion. As the fancy sickens, says a writer on this subject, with one image, it longs for another. This is the cause of the continual revolutions of habit and behaviour, and why we rose so industrious in pursuing the change; this makes fashion universally followed, and is the true reason why the awkwardest people are as fond of this folly as the genteelest. This passion for novelty, particularly in the article of dress, seems for ages to have been a predominant feature in the English character, and with the exception of our neighbours, the French, may be said to be almost peculiar to it. Most of our early writers make some allusions to it in their works, and Dr. Andrew Borde, in a satirical tract published by him in the reign of Henry VIII., to show the then excess of the folly, has prefixed, in a rude wood-cut, the figure of a naked Englishman with a piece of cloth and a pair of sheers, debating on the fashion he shall have his clothes made in. Purposing in the few slight notices which follow, to confine our observations merely to the costume of the last century, we shall pass over the fashions of those which preceded it, with only quoting some general remarks:—

"The party-coloured coat," says the author of a Treatise on Dress, published in 1761, "was first worn in England in the time of Henry I. Chaplets, or wreaths of artificial flowers, in the time of Edward III.; hoods and short coats without sleeves, called tabarts in the time of Henry IV.; hats in the time of Henry VII.; ruffs in the reign of Edward VI.; and wrought caps and bonnets in the time of Queen Elizabeth. Judge Finch introduced the band in the reign of James I.; French hoods, bibs, and gorgets were discontinued by the Queen of Charles I.; the commode, or cover, was introduced in the year 1687; shoes of the then fashion, in 1633; breeches instead of trunk hose, in 1634; and perukes were first worn after the Restoration.

About the year 1700, the ladies wore Holland petticoats embroidered in figures, with different coloured silks and gold, with broad orrices at the bottom. Muffs were at this period in use, but very different in shape and materials from those of the present day, being in general very small, and frequently made of leopard skin. Diamond stomachers adorned the ladies' bosoms, which were composed of that valuable stone set in silver, in a variety of figures, upon black silk, and which must be admitted to have been a brilliant, if not elegant ornament. Satin gowns were lined with Persian silk; and handkerchiefs, and Spanish leather-shoes, lined with gold, were common with persons of respectability. To these different articles the ladies added bare necks, with gold and other crosses suspended from them. Those odd little circular pieces of black silk, called *patches*, prevailed also at this period to a most extravagant degree These were stuck on different parts of the female face, and varied in size. Frequent allusions are made to these fancied "beauty spots," by early comic writers.

In 1709, a lady's dress is that described in an advertisement to recover one that was lost: "A black silk petticoat, with a red and white calico border; cherry-coloured stays, trimmed with blue and silver; a red and dove-coloured damask gown, flowered with large trees; a yellow satin apron, trimmed with white Persian; muslin head clothes, with crows-foot edging; double ruffles, with fine edging; "a black silk furbelowed scarf, and a spotted hood." In 1711, a lady's riding dress is advertised for sale, in the *Spectator*, of blue cambiet, well laced with silver; being a coat, waistcoat, petticoat, hat, and feathers. And another advertisement, 1712, mentions an *Isabella* coloured *Kincob* gown, flowered with green and gold; and a dark coloured cloth gown and petticoat, with two silver orrices; a purple and gold *atlas* gown, a scarlet and gold *atlas* petticoat, edged with silver; a wrought *under* petticoat, edged with gold; a black velvet petticoat; *allegah* petticoat, striped with green, gold, and white; and a blue and silver silk gown and petticoat; a blue and gold atlas gown and petticoat, and clogs, laced with silver. A Mrs. Beale, at the same period, advertises her loss of a green silk knit waistcoat, with gold and silver flowers *all over it*, and about fourteen yards of gold and silver thick lace on it; with a petticoat of rich strong flowered satin red and white, all in great flowers or leaves, and scarlet flowers with *black specks* brocaded in, raised high, like velvet or shag.

The ladies wore hooped petticoats, scarlet cloaks, and masks, when walking. The hoops were fair game for the wits, and they spare them not:—

"An elderly lady, whose bulky squat figure,
By hoops, and white damask, was render'd much bigger,
Without hood, and bare neck'd, to the Park did repair,
To show her new clothes, and to take the fresh air:
Her shape, her attire, rais'd a shout and loud laughter;
Away waddles madam—the mob hurries after.
Quoth a wag, thus observing the noisy crowd follow,
As she came with a hoop, she's gone off with a hollow!"

An advertisement, in 1703, gives a whole-length portrait of a youth in middle life. Such a figure would attract much wonder in the streets of London at present. "He is of a fair complexion, light brown lank hair, having on a dark brown frieze coat, double breasted on each side, with black buttons and button-holes; a light dregget waiscoat, *red shag breeches, striped with black stripes,* and *black stockings.*"

The ridiculous long wigs of 1710 were very expensive. One was advertised as stolen that year, said to be worth five guineas. This however, was a trifle; for Drumver's "fair wig," in the *Tatler*, cost "forty guineas." But, lest it should be supposed that the gentlemen only were expensive in decorating the head, take the prices from the Lace Chamber on Ludgate-hill: "One Brussel's Head, at £40; one Ground Brussel's Head, at £30; one looped Brussel's Head, at £30." Wigs maintained their ground, though not so enormously large in 1720; at which period white hair for them was all the fashion, and bore a monstrous price. They were still a more important article of dress in 1734; but the favourite colour had then changed—those of "right *grey* human hair" were four guineas each; light grizzle ties three guineas; right *grey* human hair "cue perukes," from two guineas to fifteen shillings each, which was the price of dark ones; and right grey bob perukes from two guineas and a half to fifteen shillings, the price only of dark bobs; those mixed with horse hair were much lower. It will be observed, from the gradations in price, that right *grey* hair was most in vogue, and dark hair of no estimation.

A lady, corresponding with her friend, whimsically describes the dress of the box-lobby loungers of 1738; from which it will be seen, whatever we may think of them, that our ancestors were by no means behind hand with us in folly. "Some of them," she says, "wore those loose kind of great coats which the vulgar call 'wrap-rascals;' with gold-laced hats slouched, in humble imitation of coachmen; others aspired at being grooms, and had dirty boots and spurs, with black caps on long whips; and a third sort wore light scanty frocks, little shabby hats, put on one side, and clubs in their hands."

In 1760, the ladies are stated to have worn the following species of caps:—The French night cap; the Ranelagh mob; the Mary Queen of Scots cap, and the fly cap. The latter we may suppose was the most esteemed, as the late Queen Charlotte, when she landed in England in 1761, was, in compliance with the English costume, habited in "a gold-brocade, with a white ground; had a stomacher ornamented with diamonds, and wore a *fly cap*, with richly-laced lappets."

The *London Chronicle* for 1762, enumerates the following articles of male attire, on which it indulges several witty remarks. Of hats, there were, the Kevenhuller; the sailors, described as uniformly tacked down to the Crown, and laughably said to look as if they carried a triangular apple party upon their heads; the Quaker's hat which is said to spread over their heads like a pent-house, darkened the outward man, to signify they have the inward light. Some are described as wearing their hats (with the corner that should come over their foreheads in a direct line) pointed in the air. These were called "Gawkies." Others are said to not above half cover their heads, but between beaver and eye brows, to expose a piece of blank forehead, that looks like a sandy road in a surveyor's plan. Of *wigs* then in use, are satirized, among others, "the 'prentice minor bob, or hair cap; the citizens sundry buckle, or bob major; the apothecary's bush; the physical and chirurgical tye; the scratch, or the blood's scull covering, and the John's jemmy or white and all white, in little curls like a fine fleece on a lamb's back. This last is the species of wig now frequently worn by a gentleman's coach-men."

Taking the fashion generally within the last 40 or 50, we find the ladies heads covered with *cushion*, as it was termed, generally formed of horse hair, and something like a porter's knot set upon the ends; over this the hair was combed straight, the sides curled, and the back turned up, and the whole powdered; diminutive caps of gause adorned with ribbands, and miniature hats generally of black silk, trimmed, were stuck on the tower of hair with long pins. The waist was covered by a large-bodied gown, drawn exceedingly close over stays laced still closer; the hips sometimes supported a bell hoop; the shoulders alternately small cloaks and cardinals; the former of muslin and silk, and the latter almost always of black silk, richly laced.

This description of dress altered by degrees to the present fashion. The head insensibly lowered; the horse hair first gave place to large natural curls spread over the face and ears; the cap enlarged to an enormous size, and the bonnet swelled in proportion. Silks became unfashionable, and printed calicoes, and the finest white muslins were substituted. Hoops were entirely discontinued, except at Court. These were all improvements; but it is only of late years that the ladies—much to their honour, have thrown aside most of the hateful attempts to supply nature's deficiences, and now appear in that native grace and proportion which distinguishes an English woman. The hair cleansed from all extraneous matter, shines in beautiful lustre carelessly turned round the head, in the manner adopted by the most eminent Grecian sculptors; and the form appears through their snow-white draperies in that fascinating manner, which excludes the least thought of impropriety. Their hats and bonnets of straw, chip and beaver, if somewhat less would be extremely becoming; and their velvet pelisses, shawls, and silk spencers, are contrived to improve, rather than injure the form.

The male dress, like the female, changed almost insensibly from formality to ease. This was effected merely by altering the cut of the clothes; the materials are the same as they were a 100 years ago; the colours however, are more grave. Instead of "Claret-coloured clothes, Pompadours, light blue, with silver button-holes, &c., deep blue, dark browns, mixtures, and blacks, are now worn by the sedate and the gay, the young and the old. In point of shape, there is, and always will be, a continued variation. The hat has as many different forms and denominations as it had in the times we have been speaking of, though not of the same kind. The modern neckcloth should not be omitted, especially as it has been more ridiculed than other parts of the male dress. It is enough to say, though some have considerably reformed it in this particular, that it has been compared to a towel tied under the chin.

Too much praise cannot be given to the abolition of the unnatural custom of wearing hair-powder. The appearance of this, in a young person at least, though only discontinued a few years, is becoming now quite Gothic.—*Albion*.

NORTH DEVON CATTLE—THEIR PRICES IN ENGLAND.

Many gentlemen express surprise at the prices asked for cattle of improved breed, from imported stock, without reflecting sufficiently on the causes, which go to shew the justice and reasonableness of such prices. The breeds in highest estimation now in England, are the Improved short horns, the Herefords, and the North Devon cattle. These several breeds, in the perfection they now exhibit for the various purposes, for which neat cattle are reared, have been brought to their present condition, by immense expense, by great skill in the selection of the progenitors, and unwearied attention to every particular, for more than half a century. Is it then reasonable to expect, that they should be sold for any thing near the prices of common cattle? As well might we expect to purchase a fine full grown tree, bearing abundantly the high flavoured pippin, for the price we should have to give for the scion of a common redstreak. We have ascertained by actual purchase, the cost of the improved short horns, when procured under the most favourable circumstances, and from one of the very best breeders of that stock in England—and we have already stated at different times, the prices of the Herefords purchased by Mr. Clay, and others in Kentucky; but the North Devons of full blood, which have fallen under our notice, were a free and spontaneous offering, to their present owners, by that enlightened and generous English farmer, Mr. Coke of Norfolk. His opinion of their superior qualities, has already been published in the Farmer, but we knew not what would be the cost of such cattle in England. Having heard that a gentleman who owns a cow of this breed, had sent to England to procure some heifers, we solicited such information, as he might have received, as to the prices at which they are selling, to which he has politely replied by the following note.—*Edit. Am. Farmer.*

Baltimore County, 11*th February*, 1823.

MR. JOHN S. SKINNER,

Dear Sir,—In answer to your enquiry respecting an order sent to England, for Devon Cattle, I take pleasure in communicating the result.

Last May I wrote to Messrs. Wm. and Jas. Brown & Co. of Liverpool, to purchase and ship to me, by a vessel in which I had previously engaged accommodation for them, three full bred Devonshire Heifers, provided their cost did not exceed $70 or 80 each, and on the 4th July, they wrote as follows:

"We should be very glad to carry your wishes into effect, as respects the stock you want; but we are sure it is quite impossible at the prices you quote. The Earl of Sefton is the only person in this neighbourhood who has any Devon Cattle, and he bought them at Mr. Child's September sales, at two or three times the price you mention, and none of his Lordship's are to be sold."

If I mistake not, you are in possession of the prices obtained by Mr. Child, at his *last* September sale for Devon cattle, and which I think will confirm the above letter.

Your's very respectfully,
H. T.

THE UNNATURAL SON.

A certain farmer in Connecticut, possessing a small estate, was persuaded by his only son, (who mas married, and lived with his father,) to give him a deed of the property. It was accordingly executed. Soon the father began to find himself neglected—next removed from the common table, to a block in the chimney corner, to take the morsel of food reluctantly given him—at last, one day the unnatural son resolved to try once more to break the heart of his sire. He procured a block, and began to hollow it. While at work, he was questioned by one of his children what he was doing. "I am making a trough for your grandfather to eat out of," was the reply. "Ah," says the child, "and when you are as old as grandfather, shall I have to make a trough for you to eat out of?" The instrument he was using fell from his hand—the block was cast on the fire—the old man's forgiveness asked, and he was restored to the situation his age and worth entitled him.

POPE'S THRESHING MACHINE.

In the fourth volume, page 253, we published the "REPORT ON INVENTIONS," made to the Massachusetts Agricultural Society, by their Committee, Messrs. Josiah Quincey, Cyrus Alger, and Paul Moody. In that report these gentlemen speak of Mr. Pope's Threshing Machine as follows:—

"The machine which most attracted the attention of your Committee, was one presented by Joseph Pope, Esq. of Boston, a gentleman long known by the public by his inventions and mechanical ingenuity. This machine is patented—intended to work by hand, in its present model, but easily capable of being enlarged and applied to a horse power.

The material to be threshed, passes through opposite sets of surfaces placed transversely in a frame. They are respectively moving rods—and constitute a threshing power on an open floor composed of stationary rods.

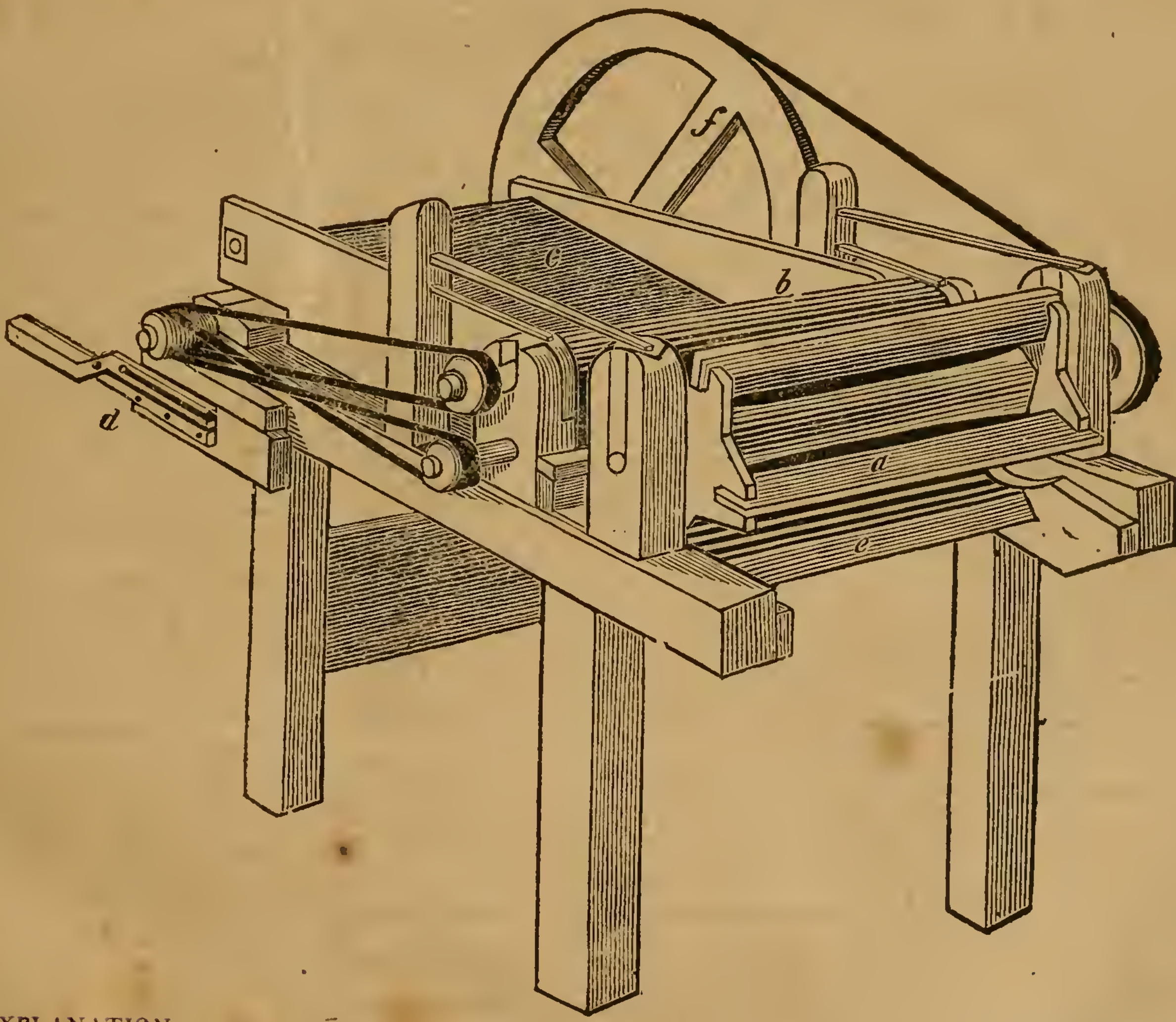
It was stated to your Committee that it threshed fifty bushels of grain in 12 hours—and four bushels and 12 quarts of oats in one hour—and that a common sized sheaf passes through it and is completely threshed in one minute. The labour is done by two hands, one destined to turn it, the other to feed it, or one man and two boys are sufficient for the same purpose.

In the experiment made before the committee, it threshed the grain out perfectly. And it is obvious that with a very small expense, it may be converted into a machine for cutting straw without any injury to its threshing power.

Owing to an accident, for which the owner of the machine is not responsible, it was not duly entered, although it was brought to Brighton and deposited in the society's room in proper season for that purpose.

As your Committee consider the machine as likely to be very useful, and as Mr. Pope has been at great expense and trouble for the purpose of bringing it to Brighton, your committee apprehend that some notice ought to be taken of it, and they therefore recommend that he should have a premium of $20, he producing the requisite certificates of its being used and approved by a practical farmer."

Since that time, frequent inquiries have been made by our correspondents for more precise information, as to the construction, power and capacity of the machine—we have endeavoured "as in duty bound," to gratify these inquiries, and now spread before them the result of these endeavours, and if they prove not satisfactory, it will be our misfortune—not our fault.—We begin with the engraving and description of the machine itself, and these are followed by the certificates of members of the Pennsylvania Agricultural Society—all of them practical farmers, and many of them known to us, and extensively known through the country, as gentlemen in whose word and judgment every reliance may be placed.—*Edit. Am. Farmer.*



EXPLANATION.

a The revolving Beater, the rods of which strike the grain 2000 times in a minute.
b The parallel fluted Rollers, that assist in conducting the straw forward to the Beater.
c The circular or endless cloth, on which is spread the material to be thrashed, and which conducts the straw to the rollers (*b*).
d The shears worked by a small crank at the end of the axle of the wheel (*f*).
e The curved floor, consisting of slats, on which the grain is beaten out.
f The wheel turned by hand.

CERTIFICATES.

Philadelphia, March 6th, 1823.

JOHN S. SKINNER, ESQ.

Sir,—According to your request, I forward you the enclosed documents relative to a thrashing machine, invented by my father, that you may, should it be your pleasure, give them publicity in your paper, the American Farmer.

This is the same machine that obtained the premium at the last Brighton Cattle Show. A description of it is fully contained in the Schedule, annexed to the patent, a copy of which I herewith hand you—attended with several certificates, testifying its capacity, both as a hand, and horse machine. The power of a man exercised at the lever, to which the horse is attached, being sufficient to move the hand machine, with the greatest ease, it appears obvious to all those who have witnessed this effect, that a horse possesses ample power to work with light labour, a machine of larger dimensions, and of much greater capacity than the hand machine in its present form. You will perceive by the certificates accompanying this, that the machine with hand power, is capable of thrashing five dozen sheaves of wheat in an hour, and that the same machine, with the application of horse power, thrashes ten dozen* an hour—this it performs without the use of the shears.—The shears indeed, should not be considered as a necessary appendage to the hand machine, and are only advantageous when the straw is long—for by removing with them the thick ends or butts of the straw, the labour at the wheel is thereby much reduced, and a more considerable quantity of grain, may be beaten out, than can be thrashed in the same time from the straw if whole—I forward you a certificate by which you will perceive how much thrashing by hand is accelerated, with the assistance of the shears.

The hand machine can be constructed at little expense, the materials, including the shears, cost $13, and it can be made by a good workman, (say a joiner or a carpenter) in 12 days.

The extra expense of the wheels for the application of horse power, does not exceed $20.

I am sir, respectfully,
Your very obedient servant,
JOSEPH POPE, Jr.

(The following Certificate will prove what advantage is gained by using the shears.)

This is to certify, that we the subscribers, witnessed the operation of Mr. Jos. Pope's newly invented patent hand thrashing machine, in Mr. Joshua Coolidge's barn in Watertown, and it beat out clear, forty sheaves of winter rye, that yielded three bushels of grain, in twenty four minutes.

(Signed) JOSHUA COOLIDGE,
ISAAC STONE,
JOSHUA COOLIDGE, Jr.
SAMUEL SYMONDS,
WILLIAM JOHNSON.

Watertown, Massachusetts,
November 1, 1822,

The thrashing machine constructed by Mr. Joseph Pope, agreeably to his patent, has been fixed up at my farm for about two weeks past, for the inspection of the public, and has been in operation most of that time, thrashing of wheat. It has well and clearly thrashed, in twenty-five minutes, sixty sheaves of wheat, requiring one man to feed the machine, and a man or boy to take away the straw. This is a small machine constructed for hand power. A horse was used to try its operation, although, the force required, was not more than any common man could easily exert.—It is fully my opinion that a large machine (such as the power of any horse would be adequate to keep in operation) would easily thrash twenty dozen sheaves of wheat per hour—and from the simplicity, power and cheapness of the machine, I think it will become highly beneficial to all practical farmers who may use it.

(Signed) MANUEL EYRE.
Philadelphia, Feb. 25, 1823.

Delaware County, Pontreading Farm,
March 1, 1823.

Mr. Jos. Pope,

Sir,—I have seen in operation with a horse, your small thrashing machine, intended for hand use, with pleasure; I am well satisfied with its principles, it appears to me to be better adapted to thrashing, than any machine I have seen or heard of; it thrashes much cleaner and more expeditiously, than is usually done by the flail or by horses, and without the objections to the latter method.

This machine should always be made to work by a horse, when it can be attended by infirm men, or small boys, who could make but little way with a flail; the same power may be at the same time carried to the fan for cleaning the grain.

Although I did not ascertain the quantity thrashed in a given time, yet I am perfectly satisfied, it is the interest of every farmer to have one. I am, with due respect, your's &c.

(Signed) JOSHUA HUMPHREYS.

Delaware County, Penn. 5th March, 1823.

Mr. J. Pope,

Sir,—We with pleasure reply to your request to have our opinion of your thrashing machine, as we have witnessed the operation of it, first by hand, and subsequently by horse power; and are decidedly of opinion (from its execution, simplicity and little liability to get out of order) that it is fully entitled to the patronage of the practical farmer. We think a machine of the size of the one you exhibit, operated upon by the power of a man, would be quite sufficient to do all the thrashing required on the smaller sized farms in the neighbourhood of Philadelphia—and that one equal to the power of one horse, would with facility thrash all the grain grown on the largest farms we are acquainted with. We are also of opinion from the trials we saw made, that it will thrash cleaner than is usual with the flail, whilst the straw not broken but bruised and softened, is left in the most favourable state for fodder.

Very respectfully, &c.
THOS. SMITH.
(Signed) AARON CLEMENT.

Powelton, Philadelphia County,
March 5, 1823.

John S. Skinner, Esq.

Dear Sir,—I can reply to your inquiries, about Pope's thrashing machine, from close examination of its construction, and attention to its performance, both here and at Brighton. It was exhibited to our society—tried by their committee, and has been again in operation before several of our directors, and many other farmers, (not "Dilletanti," nor "Book farmers,") who are not less satisfied than myself, that since it has been adapted to the power of *one* horse, it is by its simplicity, cheapness, strength, and force, better suited to our purposes, than any thrashing machine which we have seen. It costs fifty dollars, occupies not more room than a fan, thrashes 120 sheaves per hour, and can be carried in a cart, or taken to pieces at will.

I am, dear sir,
Your's truly,
JOHN HARE POWEL,
Corresponding Secretory of the Penn.
Agricultural Society.

TO THE EDITOR OF THE AMERICAN FARMER.

BROMUS CANADENSIS—(CHEAT.)

Dear Sir—You are not unacquainted with the propriety and advantage of proper names, and good definitions. By fixing these, disputes are often settled. Indeed provincial names are a high road to error—for it is no uncommon thing for five different names to be affixed to one vegetable, and again the same name to be applied to five different vegetables. The subject of this essay, is an instance where the same provincial name is given to two distinct articles.—Bromus Canadensis as above, is called Cheat, and so is Lolium Temulentum.* They are both objects of great superstition—the former in this country, and the latter in England—not only among the illiterate, but I find it adhering to the better informed, like a paralytic plant, without a foundation. It is to these I address myself.—A few questions will be proposed, to bring this article to a solitary standing, which alone would render it very suspicious, and cause it to yield in the balance, to one grain of reason, in counterbalance.

I ask the credulist, in the first place, if he ever knew (the article in question, to be excepted for the present,) any one vegetable to become another genera? And has not the vegetable family been as constant to produce after its *own kind*, as the animal race? 2d. Did he ever know any one animal, to change to another genera, by metamorphosis, or by procreation, viz. a dog become a cat; an ox, turn to an ass; or even a mouse grow to a rat? 3d. Did he ever know of a vegetable changing to an animal; even an orchis become a butterfly, or a gnat? which they so much resemble, in some of their species.

4th. Did he ever know the converse of the above, i. e. an animal become a vegetable, viz. a polypus become a sensitive plant, or a tubularia become a honeysuckle? For these are as nearly approaching, as any thing I have seen in the two kingdoms. To some of these questions, methinks, I hear a good old farmer, (who has by some mistaken whim, resolved to protect his son from hard hands, and brow sweats,) reply that his Tommy has read at the college of some lovers, that were changed to mulberry trees; and that he had found a book that told how to turn a dead heifer, into a swarm of bees. Well, my good old father, I can only say, that your polished son, will surely outdo all that you have ever done. He has only to read Gulliver to finish his education; where he will hear of some talking horses, that will take his orders, and supercede his overlooking, whilst he may stretch his dandy limbs, and floating trowsers, beneath the oak, and there in soft luxuriant idleness, enjoy the breeze; or read of Cadmus, Ajax, and Proteus too.

I will warrant that he will soon see a genuine metamorphosis on his farm, and his wheat will assuredly become cheat. But remember, my good friend, all these odd things happened in *old* times; I want some proof in things of later date—in our day, when substances are acted upon, more by physical powers, than by fiction. But the authority of Virgil, or even Ovid, is very unfavourable to your theory in this article—for they both mention the famous cheat, without any idea of its being either *a natural child* of wheat or a metamorphosis.†

It is granted, that there are changes in vegetables—but what are they? Are they not mongrels? i. e. two hermaphrodite plants, mixing their pollen and ligmatic irritability produce a third, varying from both; thus our common tobacco, mixing with another species of tobacco, produces a half blood; and this new species, or rather variety, being impregnated again, with our common tobacco, will produce a three-fourth blood—in this way, they may be carried on and reduced back again, as was tried by Mr. Kolroether, and so of animals.‡ But where is the other plant, that is to be the mother or father, of cheat? Even supposing it to be a mongrel, none can be shown. It certainly is not rye—and yet it is remarkable that there are no hybreds, from these two grains, so often grown together. But you may ask, whence comes this seed of cheat, and why peculiar to wheat grounds. Answer me first, whence comes the white clover, when we dress a piece of low ground with ashes. If you cannot answer this, I will. It comes from that great stock of seeds, that is buried below the point where exposed to air, they would rot, or vegetate—some perhaps 1000 years past. When the ground is put in that order, that admits them to rise, and a manure that is a peculiar stimulus to them is applied, they come forth in a hard sod, and without his stimulus ,they sleep. But in cultivated ground, a reigning crop keeps them under, if the weather and tillage suit. When ground is too wet for wheat, the cheat seed spring. The time and all other circumstances favouring it; and so of other articles innumerable.

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* Ten dozen sheaves of wheat here yield five bushels of grain.—*Edit. Am. Farmer.*

* *This difference of opinion in the two countries, is enough to overset their assertion.*

† *Intenque nitentia culta infelix lolium et steriles dominenter avenæ.*—Virgil.

Lolium tribulique fatigant
Tritices messes et inexpugnabile gramen.
Ovid.

S. V. S.

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‡ *Cobbet, to shew that he did not understand every thing he writes about, denies the effects of what is called the sexuality of plants, and at the same time, absurdly supposes the bulbs of potatoes under ground, to have a secret contaminating influence!*

FROM THE WINYAW INTELLIGENCER.

CLAREMONT AGRICULTURAL SOCIETY

Mr. Cleland Kinloch's report on Rot in Cotton.

The great agricultural interests of our country, the cotton crops, have suffered, of late, so much from what is commonly called the rot, that any enquiries into the subject are supposed to be not uninteresting to this Society; and, it will now be attempted to be shewn, that some palliative, at least, of this great evil may reasonably be expected, from a careful destruction of all the dead stalks, leaves, pods, &c. that are usually left in the cotton fields, during winter, and from keeping for more than a year, all cotton seed, reserved for the purposes of manuring, or of planting.

It is well known, that many of the insect tribes, which prey upon vegetables, deposit their eggs on some part of the plant preyed upon; so that the succeeding generation finds its proper food, within its reach, while it is yet too feeble, to go far in search of subsistence; in some cases, the eggs are supposed to be deposited on the seed of the favorite plant; thus, whenever the seeds of a plant, called the silk plant, have been imported into this country from Portugal, a new, and remarkable insect has always appeared on these plants; when the species of this plant has been lost among us, the insects has disappeared; and upon a new importation of the same seed, the same insect has again made its appearance: a similar circumstance has occurred, too, with regard to the black seed cotton; which, when first cultivated in this country, some 70 or 80 years ago, was entirely free from the attacks of an insect, called the chenille; but, upon a renewal of this cultivation, after an interval of many years with seed from the West Indies, the chenille (at that time the great scourge of the West Indies) soon made its appearance among us, and, in some parts of the country, were not less destructive, than the present rot in the green seed: The presumption then is, that in those too cases, the eggs of each insect have been brought hither with the seed, that the race of the one has perished, from a want of its proper food, and that our climate has, happily proved too severe for the other.

In the West Indies (when the green seed cotton grew to such a height, as occasionally to require the use of ladders, in gathering in the crop, and when its cultivation was repressed, only by the want of the saw gin) the rot was unknown, nor, was it known in this country, until after the introduction of the green seed among us, from the southward and westward of our own continent; it existed also, in a most ruinous degree, to the southward and westward, long before it was much known, or much noticed among us; and among us, it had become almost general while yet unnoticed, or unknown in North Carolina; whereas it has now extended to the neighbourhood of Halifax Court House, and even to the south mountains in Virginia: where this particular species of cotton had been partially cultivated for the greater part of a century, without any suspicion of the rot, until the present times. The presumption then is, that the eggs of the insect were brought into this country, with the seed, from the southward and westward of our own continent; that the difference of climate between its ancient, and its present places of abode, may not be sufficient for its complete destruction; and that it has gradually spread over the whole extent of the cotton country, either by an interchange of seed; or from the prevailing wind of the summer season, wafting the insects before it; or from flight of the insect itself, when in its winged state.

Some of the planters of this neighbourhood have, formerly, procured cotton seed from parts of North Carolina, where the rot had never made its appearance; and when this northern seed has been planted on lands, newly cleared, and at a distance from other cotton fields, the crop is said to have suffered less from the rot, than other crops; but when these precautions have not been attended to, there is said to have been no perceptible difference, between the produce of this northern seed, and of our own; from which it may be presumed, that the northern seed was probably free, from the accompaniment of the eggs of the insect; but that it suffered from being brought into bad company.

Lastly it has been found, that considerable benefit was derived, from opening, at the commencement of winter, the cotton trenches, destined for the next crop, and strewing therein, the necessary seed at once, leaving it uncovered, until the usual season for planting; these seeds were thus exposed to all the inclemencies of the weather, and many of the eggs, deposited upon them may have perished for such exposure.

It has indeed been confidently asserted and upon very high authority, that the rot is a disease of the plant, from a well known cause of disease, among plants, a superabundance of sap; and that superabundance of sap may be a predisposing cause of the evil, is probable; but if it or if any thing else, common to the whole plant, were the primary cause, we might expect, that all the pods of the same plant would be similarly affected, which every cotton planter knows; not to be the case: in this neighbourhood, there is a species of the pear, the fruit of which becomes rotton at the heart first, about the period of incepient maturation; but every pear of every tree of this species (so far as it is known) is every year affected in the same manner; a similar instance of a particular species of the apple occurs, at a well known orchard in North Carolina; while no single solitary instance is known, of such desultory, and capricious distinction, as by the rot in cotton, whenever destruction may, fairly, be traced to a disease of the plant.

It has also been said, that if the rot were occasioned by an insect, that insect would be seen; and, there is no doubt, but that it would be seen, if the cotton planters could be roused to the same skilful, and patient investigation, by which Linneus is said to have preserved all the timber, of the navy yards, in Sweden.

The last objection which occurs is, that if the rot were occasioned by a winged insect, the eggs of this insect (according to the usual economy of all the insect tribes, which, during some period of their existence, are winged) would become worms, and would, occasionally, be found in the cotton pods as the worm in the peach, and other stone fruits, &c. but in this instance, there is a clear misapprehension of the theory of some of those, who impute the rot to an insect, even a winged insect: they do not impute the evil to a worm, the produce of an egg, deposited by a winged insect itself, puncturing the pods, to draw its nourishment from them, and thereby superinducing upon them an incurable malady; while it, the winged insect, may continue its species, by depositing its eggs, on some part or other of the plant preyed upon, or on the pods; so that, if every part of the plant, usually left in the fields during winter, could be destroyed, perhaps by fire, the eggs deposited on such parts might share their fate; and if all the seed, reserved for use, could be kept for more than a year, the eggs deposited on this seed might be hatched, while in such keeping; and their produce might perish from a want of the usual supply of food: thus in the West-Indies, when the ravages of the chenille became intolerable, the cultivation of the black seed cotton was abandoned, throughout whole districts; and when, after an interval of one or two years, this cultivation was resumed, the chenille was first scarcely known, and its ravages, for several seasons together, were inconsiderable; until wafted about by winds, or spreading themselves by flight, they again increased to their former destructive numbers; upon every return to this cultivation, the eggs deposited on any parts of the plant, or on the seed, must, it is presumed, have been hatched, and their produce must have perished, and an entirely new generation must have arrived, from some of the neighbouring districts.

At any rate, if the rot should be a disease of the plant, the use of seed, more than a year old, may still be advantageous; for as it is well known that the flour of some vegetables is in some cases affected by the age of the seed, the age of the seed may possibly, have some effect on their health; and among the experiments, which this interesting subject seems to demand, from every agriculturist, we may, it is thought, be justified, in recommending one, that holds out a double chance of success.

The experiment indeed was made, and fairly made, the last season, by a member of this society; seed more than a year old, was planted on land newly cleared, and at a distance from all other cotton fields, but unfortunately the whole was destroyed, by the freshets.

Editorial Correspondence.

Richmond, Feb. 11, 1823.

VIRGINIA UNIVERSITY—EXTRACT TO THE EDITOR, FROM A MEMBER OF THE VIRGINIA LEGISLATURE.

The prospects of our University are improving. We have obtained a third loan of $60,000 to complete the buildings. The original annuity of $15,000, set apart from the income of our literary fund, for our University, is now charged with the interest of $180,000; that is, to the amount of $10,800, leaving only $4,200, of free income. Yesterday and to day, we have made an effort to get the debts of the University extinguished; but have failed. It cannot be done till next session of Assembly. Should it be then effected, measures may forthwith thereafter be taken, to engage professors, with the view of opening the institution in the fall of 1825. Delay is the price we pay for unanimity. But unanimity will come. The opposition diminishes, and the institution is gaining ground. We shall in a few years, have all Virginia with us; and headed by the admired sage of Monticello, I trust we shall accomplish a work that will be a lasting blessing to the Union. I think you may calculate pretty confidently, that our University will open in two years from this time, which I hope will be in time for your sons.

MILLET.

Burlington, March 28, 1823.

Dear Sir,

I observe in your 52d number, just received, mention is made of white millet seed, received from Col. Pickering. I am desirous of ascertaining whether this is the same kind, which I have cultivated for several years, of which I send for your inspection a small sample.* In 1821, I had about 11 tons from 5 acres, and last year about the same product, from another lot of about 5 acres. I cradled it as wheat, bound it in large sheaves, brought it in the following day—threshed the sheaves at the end of several months, without unbinding them, and obtained about 17 bushels of seed per acre; returned them to the mow for the use of my horses, who ate it as greedily as the best timothy hay. This mode of managing the millet saves much room, as it is very bulky; more seed is saved, than when cut with the scythe as hay—I calculated the product at about 20 bushels per acre, including the seed remaining in the unbound sheaves. In 1821 I had about 30 bushels, weighing 55 lbs. each, ground for my hogs, who ate it as eagerly as Indian meal, given to them at the same time.—Both crops were sowed about the 6th June, and gathered in the middle of August—they were sown after Indian corn—one year with one ploughing, and the other with two, and harrowed in, without any perceptible difference—the quantity of seed, half a bushel per acre—the averaged length of the straw, about 5 feet. I have this year sold it at one dollar per bushel for seed, which is much in demand.

Very respectfully, your's,

WM. COXE.

John S. Skinner, Esq.

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* The millet sent by Mr. Coxe, is of the common kind, and that which is generally referred to in communications which relate to that grain. That from Col. Pickering, was very different, being somewhat larger, rounder, and whiter grain.—*Edit. Am. Farmer.*

BY T. G. FESSENDEN.

RURAL PEACE AND INDEPENDENCE

That man is fortunate, who, timely wise,
Life's peaceful blessings can discern and prize,
Who ne'er his talents, wealth nor time employs,
In quest of costly and tumultuous joys;
Nor churlishly refuses to partake
Of God's good things, created for his sake,—
Spurning the gifts of Deity design'd
To cheer and bless the lot of human-kind—,
With some good books, some good companions blest,
"Health in his veins, and quiet in his breast,"
Aloof from scenes of riot, noise and strife,
Enjoys the comforts of a rural life.
Him no anxiety, no fears appal;
He ne'er submits to "low ambition's" thrall,
Ne'er condescends a falsehood to impart,
But makes his tongue the herald of his heart—
Ne'er stoops to high, nor spurns at low degree,
His manners still from affectation free,
He never masks grim malice with a smile,
Nor makes hypocrisy the guise of guile.
Though sometimes blunt, he always is sincere,
And what he is, is willing to appear.
Though no rich labors of a foreign loom,
Nor costly paintings decorate his room,
Light, but sound slumber, softly seals his eyes,
That boon of innocence and exercise,
Which monarchs covet, but cannot enjoy,
Sweetly rewards his every day's employ.
Health tempers all his cups, and at his board
Reign the cheap luxuries his fields afford.
Seen from the eylet-holes of his retreat,
High Life appears a bubble and a cheat;
He marks the many who to ruin run,
Knaves who undo, and fools who are undone,
Some by a sordid thirst of gain control'd,
Starve in full stores, and cheat themselves for gold.
Others devour ambition's glittering bait,
Striving to gain the dignities of state,
Much harder, and more dirty work go through
Than farmers can be call'd upon to do;—
Beholding these, is thankful that his lot
Gives peace and freedom in a country cot.

TO PRODUCE A YELLOW ROSE, WITHOUT A THORN.

Take the genistella, or sweet broom; cut it down to within a few inches of the ground, engraft upon the centre stems, slips from the white rose bush, and if the process is properly managed, you will produce the rose without a thorn and of colour as yellow as the most brilliant jonquil.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 11, 1823.

FOREIGN NEWS.

Since the last number was issued, later dates have been received from England, by the way of New York. France and Spain are preparing for war, but the blow had not yet been struck. It is yet impossible to say, what will be the precise course taken by England. It is known that we do not speculate in great matters of state, except to draw conclusions, as to the probable effect of political movements on the prices of the commodities, which constitute the staple products of those who patronise the Farmer. From the best view we have been able to take of the latest news, it appears to us, first, as to England—that she is waiting to see how the Spaniards will meet the first shock—should they preserve harmless, the person of the King, and make resistance worthy of their cause, the English will probably, after a few months aid them, with her fleet and her money—she may reckon also, on the hearty co-operation of Portugal—but

Spain herself, seems to be in a most critical situation.—On the one hand, it appears certain, that the King is secretly in the views of France, and the danger is, that his treachery will provoke them to dethrone and decapitate him; in which case, the cry of revolution and bloodshed, will be raised against her, and she will lose not only the actual assistance of the government of England, but the moral force of public opinion, in her behalf.—Of France—it is said that disaffection has been manifested, in the ranks of the French army on the frontiers, and so great was the riot and uproar in the House of Deputies, that it was found impossible to proceed with business.—Thus it appears that the Spaniards have more to hope from opposition to the war in France itself, than from any other resource—but another month may demonstrate the short-sightedness of all these conjectures—we have carefully noted all changes which have taken place in the prices, they will be seen however to vary very little, from our last quotations.

Prices Current at London, March 5.

Ashes, U. S. pearl, per cwt. 52s. cotton, S. island, fine, good and middling, per lb. (duty paid) 11d. a 1s. 8d; stained and ordinary 7 a 10d; N. Orleans 8 a 10d; Georgia bowed 7 a 9d; Carolina rice, new, per cwt. 41 a 44s; old 37 a 40s; tar, Carolina, per bbl. 15s; Virginia, 17s; tobacco Maryland, cargoes (in bond) per 100 lbs. 27 a 30s; fine yellow, per lb. 16½ a 21½d; fine colour, 13½ a 14½d; light brown, 6 a 9d; 8 ord. and scrubs, 2½ a 5½d; Virg. ord. and dry, 3 a 4d; part faded, with flavor 4 1-8 a 4½d; middling do. 4½ a 5½d; part black 5¾ a 7d, fine black and sweet scent, 7 a 7½d; stemmed 4 a 6½d; do. very fine 6½ a 7¼d; Kentucky leaf 3 a 4d; stemmed 4 a 5d; cargoes per 100 lbs 23 a 23 5d; turpentine, rough, per cwt. 16s 6d a 17s.

The demand for cotton has been considerable, and the advance of ¼ per lb. on the East India sale has been readily obtained. The purchases since our last are chiefly on speculation—the sales consist of 2400 bags, &c. viz. in bond, 300 boweds 7¼d fair, to 8¼ good; 200 Madras, 5 7-8d and 6d good and fair; 500 Surats, 5 5-8d fair, to 6d good fair; 1300 Bengals, 5 1-8d and 5 1-4 ordinary, 5 3-8 a 5 3-4, middling to good fair, and 6d good. Also, 75 Grenadas fair 9½d duty paid, and 80 fine Demerara 11d.

Prices Current at Liverpool, March 6.

Cotton Georgia bowed, 6¾ a 8¾d; Sea Island, 7 a 10½d; N. Orleans. 7¼ a 10½d; Tennessee, 6½ a 7½d—Tobacco, James River, leaf fd. 2½ a 2¾d; ord. sound, 3 a 4½d; middling, 5 a 5½d; good and fine, 6 a 7½d; stemmed, 3 1-2 a 7 1-2d; Rappahannock. leaf, 2 1-4 a 4 1-4d; do. stemmed, 3 a 5d—Ashes, N. Y. 1st pot, 58s; Boston, 58s; Am. pearl, 55 a 58s—Rice Carolina, in bond, 20 a 23s—Tar, Am. 13 a 16s—Quercitron bark, N. Y. 12 a 14; Philad. 13 a 16s—Turpentine, rough, 12 a 14s. 6d.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 50—Howard st. Superfine, $7 25—fine do. $6 75—Wharf, do. $7 to 7 12½—Wheat white, $1 55 to 1 60—Red do., $1 50 to 1 55—Rye, 75 to 78 cts.—Corn, 61 to 63 cts.—country Oats, 55 to 62½ cts.—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, $3—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb—Eggs, 18¾ cts. per doz.—Hay, $17 per ton—Straw, $10.

Maryland Tobacco.—Ten hogsheads of fine red tobacco, the crop of Mr. B. M. Hodges, from Patuxent, sold this day at 4½ a 11½ per hundred. This parcel was greatly enhanced in value, from the very judicious manner in which it was assorted, and its general excellent condition.

INTERNAL IMPROVEMENT.

DELAWARE CANAL.

TO THE CITIZENS OF PHILADELPHIA.

Friends and Fellow Citizens—We submit to your most serious reflection a subject of more importance to your vital interests, to the prosperity of our capital, and to the general welfare, than any that has been under consideration for years, which, we regret to state, has not hitherto attracted that degree of attention, which it ought to command. We mean the completion of the Chesapeake and Delaware Canal, which, for fifty or sixty years past, has been at various times presented to the public view—but, by a most extraordinary and unaccountable fatality, has hitherto mocked the sanguine hopes and anxious expectations of our public-spirited citizens, and remains a reflection either on our want of good sense to discern, or of public spirit to promote our true interests.

To the unfortunate result, we should readily reconcile ourselves, were the difficulties of the undertaking insuperable, or the expenses so great as to be beyond our ordinary resources. In that case, such an issue as has taken place, would be perfectly natural. But when we consider tne immense disparity between the sum required for, and the boundless advantages that would accrue, from the completion of this object—and further, when we reflect on the wealth, the great resources, and the increasing population of our capital, we are truly humbled and mortified that such a magnificent undertaking, so easy of accomplishment, should have so long lingered in the execution—that so little progress has been made in it, and that even now, without some extraordinary exertions, its completion seems almost as remote as it appeared twenty years ago.

The object of the present address is to produce those exertions, and to convince you, fellow citizens, how intimately connected in this case are private interest and public spirit—and that in following the expanded and liberal dictates of the latter, you will as fully promote the former, as if you were solely actuated by mere views of personal advantage.

We shall now state the actual situation of the funds of the Canal Company, the deficit which is requisite to be supplied, in order to complete the work, and propose a simple plan for accomplishing that object:

Of the original subscriptions, there are about 700 on which the instalments recently called for have been paid, the balance on which, of course, may be safely calculated on. This balance is 95 dollars per share, equal to	$66,500
There are 306 shares, on which there have been 100 dollars each paid, and the same due, equal to $30,600—of which suppose about two thirds to be collected	$20,000
There are 82 shares, on each of which 60 dollars have been paid—and 140 dollars due—99, on which 30 dollars have been paid, and 170 dollars due, leaving a balance on the whole 181 shares, of 28,000 dollars; we will suppose one-half may be collected, equal to	$14,000
There are 344 shares, on some of which only 5, and on others 15 dollars have been paid, leaving a balance of 66,700 dollars—but as few of these will probably be completed, we make no calculation on them.	
60 new shares	$12,000
Subscription from the Philadelphia Bank	100,000
Subscription from the State of Maryland	50,000
State of Delaware	25,000
Funds actually secured - -	$287,500

The recent estimate by Mr. Strickland, of the expense of a canal for sloop navigation, sixty feet wide at the surface, nine feet deep, and 14 miles long, from Newhold's landing, opposite the Pea Patch, to Black creek, is	$700,000

It therefore follows, that the deficit is only about 412,500 dollars, and that 2000 shares, at 200 dollars each, would very nearly suffice to complete this great work, a main link in the chain of internal water communication from Boston to South Carolina.

And surely, there cannot be any difficulty in procuring, by proper exertions, in the city and liberties of Philadelphia, containing 130,000 inhabitants, and about 22,000 houses, individual subscriptions to this amount.

Gentlemen acquainted with the feelings and views on this subject, of the citizens of Delaware and Maryland, assure us, that we may safely calculate on considerable aid from thence, particularly from the eastern shore of Maryland. But we lay no stress on this aid, as the object can be accomplished by Philadelphia alone.

There is not in the United States, perhaps not in the world, a situation for the location of a canal, which would produce more advantage than the proposed one would insure to Philadelphia. To the shores washed by, and adjacent to, the Chesapeake and the Susquehanna, the Potomac and the Rappahannock, and partly the James's river, Philadelphia would through this canal afford the most natural and advantageous market. At present three fourths, perhaps more, of the produce of those rich countries, are absorbed by New York and Baltimore, which furnish in return the same proportion of the foreign and domestic merhandise consumed there. In seeking the former market, vessels from that quarter are exposed to the risk and loss of time attendant on doubling the capes of Virginia. Were the proposed communication opened, can it be for a moment doubted, that most of the sloops which navigate the Chesapsake, would almost as naturally seek this market, as those which shall navigate Lake Erie will seek the Albany and New York markets as soon as the great western canal is completed?

Should Philadelphia acquire by this canal, even but one half of the increased trade, on which we may confidently calculate, the real estate in the city, and the industry and talents of its citizens, would be enhanced in value from 10 to 20 per cent. This consideration comes home to the "business and bosom" of every individual in the community, without exception. And it is a truth susceptible of demonstration, that it would amply repay our citizens, if the whole present balance of the subscription were raised, without any expectation of interest. Indeed it is not an extravagant calculation to assume that the advantage which would accrue even to those who support themselves by the labour of their hands, would compensate them for the expenditure, were it to devolve on them alone. To illustrate this position, which would otherwise appear paradoxial, we submit the following striking view of the subject to your calm consideration.

The shares are 200 dollars each. And as the completion of the canal will probably require three years, the subscriptions might be arranged as follows:—20 dollars when the requisite number of subscriptions is procured—60 dollars at the end f the first year—60 at the end of the second—and 60 at the end of the third. Thus 2000 individuals, paying merely at the rate of about one dollar and a quarter weekly, (a sum which could be afforded, by those who work for six or seven dollars per week,) would in three years complete a work, the want of which, during the last war, cost the government and individuals, in the extra expense of transportation, probably 750,000 dollars; individuals probably half as much in the amount of captures; and a third in the circumscription of trade—and the want of which has long been a subject of reproach to the nation, and of regret to every citizen who has any regard for the public welfare. Has the world then ever witnessed a much more extraordinary delay than has taken place in this case, with so practicable and useful an undertaking? We believe not.

But fortunately, however light the sacrifice would be, to subscribe without expectation of interest, there is no occasion for such a sacrifice; for there cannot be a doubt that the stock of this canal would be as productive as almost any other stock in the U. States, probably yielding from 8 to 12 per cent. per annum.

There is one point to which we earnestly request your particular attention. Different routes have been proposed by different gentlemen, each supported by plausible arguments. Hence opposition has been excited. To this diversity of opinion may the delay of the great work be in some degree ascribed: for we lament to say, that many gentlemen, some of them of great public spirit, have resolved to afford no support to the canal, *unless the particular route to which they give a preference is adopted!!* This spirit is truly unfortunate—is greatly to be deprecated—and we hope will be for ever abandoned. The paramount object is to cut a canal so as to open a communication between the great waters of the Chesepeake and the Delaware. The particular location is altogether a secondary consideration.—There have been three, four or five routes proposed, any one of which would completely subserve the interests of Philadelphia.—Let us, therefore, lay aside all controversy on the subject of the route—exert our energies to raise a sufficient sum to complete the grand work—and then let the site be determined by the board of managers, under the advisement of experienced engineers from New York, who have no undue bias for any particular location.

The following statements of the exports and tonnage of the three ports of New York, Philadelphia, and Baltimore, will show the decline, speaking comparatively, of Philadelphia, and the necessity of making every exertion to regain, as far as possible, the rank from which she has fallen. In 1796, Pennsylvania was the first exporting state in the union—Her exports were *above a fourth part of the whole of those of the nation at large*—whereas, in 1820, she sunk to the seventh grade—and her exports were not *a tenth part of of the whole.* Her domestic exports in the latter year were *not a seventeenth part of the exports of that description*; for the total domestic exports for 1820, were $51,683,640—whereas those of Pennsylvania, were only $2,948,879.

Total Exports Foreign and Domestic.

	1793.	1802.	1818.	1820
NEW YORK.	2,932,370	13,792,276	17,872,261	13,163,244
PHILADELPHIA.	6,958,834	12,677,755	8,759,482	5,743,549
BALTIMORE.	3,665,056	7,914,225	7,570,734	6,609,364

Registered Tonnage employed in the Foreign Trade.

	1793.	1801.	1816.
New York,	45,355	106,023	191 355
Philadelphia,	60,942	109,036	77,730
Baltimore,	26,792	55,986	83,123

Total Tonnage entered in 1821.

New York,	217,538
Philadelphia,	78,049
Baltimore,	56,837

After recommending these tables to your sober and attentive consideration, we conclude, with the fond hope, as the subscription is so small, and the terms of payment are so very easy, that no citizen, but those whose circumstances will not justify them in incurring the expense, will hesitate to subscribe towards this grand undertaking as far as his means will allow. We shall receive with equal thankfulness subscriptions for single shares as for five or ten, when the former are regulated by that regard to the means of the subscriber, which prudence and common sense dictate.

Resolved that a committee of five members for each ward in the city, Northern Liberties and Southwark—and two for Moyamensing and Passyunk, be authorized and empowered to procure subscriptions for the completion of the Chesapeake and Delaware canal on the terms herein stated:—

Form of Subscription.

The subscribers hereby pledge themselves to pay the subscriptions annexed to their names respectively, in the following manner:—

20 dollars per share as soon as ——— shares are subscribed.

60 dollars	on the 1st of May, 1824.
60 dollars	on the 1st of May, 1825.
60 dollars	on the 1st of May, 1826.

But this subscription is not to be binding unless ——— shares are subscribed within three months from this 10th of April, 1823.

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FROM THE WINYAW INTELLIGENCER.

CLAREMONT AGRICULTURAL SOCIETY.

The following extracts, are taken from a Communication made by Dr. Bracey to the Hon. W. D. James, Chairman of the committee on Rot in Cotton.

"On a spot of luxuriant cotton, which I had observed to rot rather worse than the rest of the field, I was induced to try various experiments, such as taking away the bed, twisting the branches, wounding the stalk, breaking the limbs, &c. I found when vegetation was by any means interrupted, the rot was uniformly checked, and the wounded pod, either healed up, or spread no farther. I had marked several pods, by binding a thread around them, to observe minutely, the changes, in the various stages of rot, as well as effects, of lessening the circulation of the juices. The rot becomes manifest, first, by a spot of deeper green, about one twelfth of an inch in diameter which ultimately mortifies, and destroys the whole, or a great part of the pod. I found the rot to vary in its destructive tendency, depending on the state of luxuriance, its situation, and the weather, as in wet weather, the plant was tender, and abounded with redundant juices, consequently more easily punctured, and more disposed to mortification. In dry weather the exterior of the pod is tough, and very little of the fluid of the plant in circulation. These circumstances combined, evince the great difference, which may have been remarked by every planter, in the progress, and cessation so often manifested, during the season of rot. In attentively watching the changes, which resulted from my experiments, in the modes of interruption of vegetation, the least likely to injure the plant, and at the same time arrest the progress of rot—I observe on one of the marked pods, a *Small Insect*, busily engaged puncturing it, in which it succeeded; it remained with its proboscis in the pod about two minutes, apparently extracting the juices, increasing during that time greatly in size, from the quantity of fluid taken in, I suppose, as nourishment; it then withdrew its proboscis, laying it up along the breast, quickly hiding itself, among the leaves of the plant. As I had long discarded the belief that the rot was owing to an insect, and so different was this from the insect said heretofore to depredate the fields in the night, I was about to turn my attention to something else, and think no more of it; when, shortly after, I saw another emerge from its hiding place, on an adjoining plant, and with great readiness, reached a pod, which it soon penetrated, and remained nearly the same length of time the first did, and retired in a similar manner. My attention was now awakened, and I began diligently to search for them, success soon gave me an opportunity of properly identifying them by close examination. I left this spot, and went to a part of the field, where no impression had been made on vegetation and quietly concealed myself in a place, where there was much fresh rot around me; so soon as all was quiet, (as it seems to be particularly necessary to be still some time, before they move about) I observed on one pod, two of these Insects, both having entered their proboscis before I discovered them, and were extracting the juices from the pod. As soon as they retired, I tied a thread around the pod, and examined it attentively, but observed no change as yet; I soon had another and a third opportunity of marking pods, which I saw the insect puncture. About two hours after, I visited these pods again and observed the perforations had changed to a deep green, exactly on the part of the pod, I had seen the insects bore. The day after I visited them again, and discovered two out of the four, had turned dark and beginning to enlarge, the others seemed less, and healing. I suppose I had by this time seen about fifteen insects in all. I caught two or three, carried them home, and the day after, having kept them about fifteen hours without food, I placed them under a tumbler, with a fresh pod of Cotton, and it was indeed remarkable to see the quickness they manifested in piercing it. No injurious or destructive change takes place in punctured pods, which have been detached from the plant, or where vegetation is even properly checked. In my succeeding visits to the pods marked in the field, most of them rotted exactly as I had observed the rot to progress before I knew any thing of the insects, some of them healed up, as I have remarked many do, which I did not see punctured, both before and since the discovery of the insects. I therefore discard the erroneous doctrine of the disease existing in the plant itself, finding that I had mistaken effect for cause and had been heretofore, obliged to reconcile diseased plants looking vigorous, producing healthy pods, and sound cotton, and many other contradictory circumstances, which have all become consistent, and natural so soon as the insects were discovered.

It is a well known fact, that every plant has some insect, which feeds, almost exclusively on it, cotton affords many insects nourishment, as the cut worm, various caterpillars, and two branches of the family of the hemoptera-tribe, class cimex, one kind large resembling the blood sucker, and nearly as large as the artichoke bug, of these there are very few in number, but their puncture which is generally about the foot stalk, is very destructive. The other is very small, and numerous, and would scarcely attract notice, from its harmless appearance, but in truth is the great and formidable enemy, in the destruction of our cotton crops. This small insect, makes a puncture in a pod of cotton which resembles exactly the puncture made with a small needle, yet the puncture made with a needle, never deranges the contents of the pod, because it takes out nothing; but a plethoric state of the plant, which is a predisposing, and not a primary cause, (as is alleged by some,) becomes instrumental in its destructive tendency, only when a portion of the fluid of the pod, has been taken out, though ever so small in quantity. This fact I proved, among many other experiments, in the following manner: I constructed an instrument, with an extremely small and delicate end, which I introduced in a puncture first made with a needle, and drew out by the action of a piston, a small portion of the fluid of the pod—rot uniformly followed, every instance, in which I used this instrument on a plant, in a state of repletion; yet it never occured, from a puncture made, with a needle alone. Therefore it seems that the nutriment extracted by the insect deranges the circulation of the fluid in the pod, and mortification ensues, by such an abundant supply from the plant, restoring the loss, that the powers of the pod, are unable to assimilate it.

Rather more than half the punctured pods, rot in wet weather, or on moist situations, but in dry weather, when the plant does not abound in juices, not more than one in twenty is destroyed, the rest sustaining very little injury. This insect seems to extract nourishment from no other substance, as I have kept them until they were nearly starved and could never yet get them to puncture any other substance, than pods of cotton, though they were repeatedly offered, many kinds of wheat and vegetables.

It may perhaps be asked, why the green seed cotton should rot and the black seed when fresh from the Islands be exempt from it? I can only recommend to such as find a difficulty on that head, to taste a pod of each, and the evidence will be such as requires no great powers of epicureanism, either in man or insect, to select the sweet agreeable taste of the one, from the disagreeable bitter of the other.

Naturalists assert that immense numbers, of various insects, perish every year in the midst of vegetation, merely because they are unable to find the exact food to suit their taste;—it is on this ground that Louisiana has been freed from the rot; as the planters ceased getting supplies of green seed from abroad, and their own stock of seed become changed to black seed (as it soon does) by successive planting, and the influence of climate and soil, the insects perished for want of their proper food, consequently the rot ceased.

The eggs of the insect are deposited on different parts of the plant in October; we bed in the undecayed leaves and parts of the stalk in spring, consequently we literally plant the insect in the egg state, which becomes a worm, by the influence of the summer's sun; which worms, in due time, becomes this insect, having its proper food within its reach, these changes take place, in the latter part of July and beginning of August. At first they are small and green, and would at this time attract no notice, on account of its harmless appearance; they are at this age to be found in very great numbers, and notwithstanding their apparent insignificance we begin to see punctures and rot; soon they change to a brick dust colour, being at this age much less than the lady bug, of an oval form, flat, without wings, six legs, runs very fast, with a pair of horns or feelers, and carries its proboscis, drawn close under, along the chest; they remain but a few days in this state, before the body lengthens, and they acquire wings, having attained when fully matured, the size, and something of the appearance of the fire fly, possessing great activity, and vigilance; they fly off at the approach of any thing, and are not now to be seen in such numbers, but are rather difficult to find at this age. They feed very often in the course of the day, which accounts for the great destruction of cotton from this heretofore invisible enemy. They emigrate Eastwardly at the rate of from ten to twenty miles annually, and appear in that respect alone analogous to the Hessian fly.

I cannot omit this opportunity, of suggesting a few hints on the important point of prevention, and remedies. I have often heard that the burning of brimstone in cotton fields, has entirely stopped and prevented further losses from rot; as yet, I have had no experience on the subject, but from the well known pernicious effects of brimstone on insects, I am strongly disposed to credit it, but the advantages in its application would be just after the insects had changed from the worm, until their maturation, as at this period they are without wings, and could not escape.—Checking the growth of the plant, by taking away the bed of earth about it, either with hoes, or ploughs, twisting the stalk of the plant &c. an excellent remedy—the pod by being deprived of the redundant juices, sustains little or no injury from the puncture.

I think however, that the burning of the undecayed leaves and stalks would be a much more effectual remedy; originally they were burned, and I question if that plan was still pursued, generally, but the rot would be greatly lessened, if not entirely prevented, as it would be the most favourable time to destroy their eggs."

Cotton.—A Mr. Dunham, of Long Island, has ascertained by experiment, that cotton can be raised in the Northern States without fear of injury from the frost. He planted the seeds in the early part of May; the plants began to flower in August, and continued to grow until the first frost which checked all further vegetation. There had been one picking before the frost; and after the frost there were other pickings, viz. on the 1st and 20th November; on the 5th, 14th, and 25th December; on the 14th January; and a few more pods were expected to be gathered about the 1st February. It appears that after the frost has stopped the progress of vegetation, there is so much nourishment left in the plant that every pod of any size matures, expands, opens, and yields as good cotton as that which is produced before the frost. Mr. D. planted and hoed his cotton in the same manner as corn is commonly cultivated.—*Hamp. Gaz.*

ON THE MANAGEMENT OF HORSES AND DOGS—BY AN EXPERIENCED SPORTSMAN.

I shall begin by making known the most useful medicine for horses that I am acquainted with. I have constantly used it for above thirty years, and, may in truth say, I have given it one hundred times. I shall relate how I first proved its surprising efficacy. About thirty years ago, when I was confederate on the turf with my friend Mr. Robert Pigott, when his celebrated horse SHARK was at his best,—Mr. Pigott trusting the whole conduct of his stables to me, I came, some days before the meetings, to try his horses and my own, and to see his horse Shark take his last sweat, before he ran with Lord Abingdon's Leviathan, for a very large sum of money we both had depending on that race.

Shark went through his sweat, at the dawn of day, very well, and to my perfect satisfaction; after which he was taken home, fed, and locked up, till twelve o'clock at noon. At twelve o'clock, when the trainer, Thomas Price, and myself came into his stable, we found all his legs swelled, his hind legs very much indeed, quite up to the hocks, and his fore legs considerably. I was much alarmed, and told Tom Price to keep the door locked, that none of the boys might see the condition he was in, and that I would send a servant to Mr. Pigott, to inform him, that he might get his money off.

Price said, "Sir, you are alarmed at that which is of no consequence whatever. Horses' legs, after sweating, frequently fly, and, I assure you, I have had many horses more swelled than Shark is. Provided his legs are not fine by to-morrow night, I will suffer death; and, to prove to you my sincerity, I will, if you will allow me, stand every shilling you have on the race; and I know you have a very large sum depending. I will give him something which, by to-morrow night, shall make his legs as fine as they were yesterday." "You shall give him nothing," said I, "unless you tell me what the medicine is composed of." "It is the most simple and innocent of medicines, sir: I will write it down for you, and you shall go yourself to the apothecary's and have it made up, and see it given to him yourself. It is this: ONE POUND OF NITRE, AND HALF A POUND OF SULPHUR, (*flower of brimstone,*) MIXED UP INTO A MASS WITH MOLASSES." For Shark, I had it made up with honey, being so valuable a horse; but I never have given it to any other horse, except made up with molasses—and I look both on the honey and molasses, as only vehicles to give the nitre and sulphur. Before one o'clock at noon, I gave Shark a ball of it, as large as a good-sized hen's egg; at night another; the next morning, another; and, in the evening, about five o'clock, another. At night, when we shut the stable up, we could scarcely perceive that his legs were at all swelled; and, at day-break the next morning, his legs were as fine as they ever had been. He had *two balls* given him *the first two days*, but *only one every day after*, until the day he started for the match, which was seven days after he had taken his sweat. His exercise was stopped only two days, during which time he was only walked, which, I am convinced, benefited him, for he was a delicate horse. All running horses and hunters, must be well purged; if they are not, they will never stand their work, without *flying to pieces*, as the grooms vulgarly call it.

It is not necessary to purge draft horses, or hackneys. I have not physicked one for above thirty years. You need only give them one ball, as big as a hen's egg, every day, until they have taken the whole mass which I have prescribed. Give this in the spring; and, provided you find their legs swell again, from work, or that they look unkind in their coats, give it them again,—for you need never stop their work.

Farmers, who are fond of having their cart-horses look well in their coats, when they go to market, are in the habit of giving antimony and other noxious drugs to their horses; this medicine will answer every purpose, and is most innocent and simple, and very efficacious.

Ignorant John Groom, and the farrier, equally ignorant, whenever a horse looks unkind in his coat, and most particularly when his legs in the least swell, give him, for two or three successive days, a strong diuretic ball; which makes the horse stale profusely, weakens him, and is detrimental to his constitution. Diuretic balls are composed of rosin, juniper-berries, and other violent, strong diuretics, violent in their operations, and noxious to the animal. The medicine I recommend is perfectly innocent, and so mild and gentle in its operation, that it acts insensibly on him, and is not to be perceived, but by the cure.

The first horse, after Shark, I gave this medicine to, was a most valuable brown horse, a hunter, presented to me by my worthy and old friend, Lord Egmont. The man who sold him to my friend, had deceived him, by telling him, that the horse had been properly physicked before the season. I had not rode him much above a fortnight, ere he flew all to pieces.

My groom came in one morning, and desired I would look at my horse. I found his coat extremely rough, staring, and unkind to the feel, and his legs very much swelled. I gave him, the first day, two balls; the second day two balls; and every day after only one ball, until he had taken the whole mass. I hunted him on the fifth day, his legs being nearly as fine as they had been, and his coat every day looking better and kinder to the feel. Since that time I have given it to some hundreds of horses.

I gave this receipt to a horse dealer in London, an old acquaintance of mine, who was accustomed, whenever he had purchased a lot of horses in the country, when any of them flew at the heels, their legs swelled, or looked unkind in their coats, to put them under a regular course of physic; by which method he lost the sale of his horses for six weeks. He has assured me that, ever since I gave him my receipt, his horses have, in ten days, been fit to shew to any gentleman.

I do not assert that this medicine will cure a confirmed grease in horses' heels, but it will cure an incipient disorder. Be sure never to apply any grease or ointment to the horses' heels, nothing but a turnip poultice. If the grease be obstinate, nothing but mercury will cure him, thus administered: Give the horse TWO DRACHMS OF CALOMEL OVER-NIGHT, AND THE NEXT MORN A COMMON ALOETIC PURGE. This must be repeated three times, stopping one or two days between each dose; after which give him the nitre and sulphur balls. This process will cleanse him thoroughly.

When horses come in from hunting and perfectly empty in the stomach, when you give them a double feed of corn, before they have eaten one half, you sometimes will observe them leave off feeding for a time, turn their heads back and look at their flanks; sometimes they will even lie down for a minute or two, then get up and finish their corn. Wise John Groom says directly, to a master as wise as himself, "Sir, your honour's horse has got the gripes; I will give him a comfortable drink, which will soon relieve him." John Groom might just as well rub the horse's, or his own shins with a brickbat. This proceeds from the horse having worms. The worms, as hungry as the horse, begin to feed; and, by moving about in the body of the horse, make the horse, for a time, sick.

Two drachms of calomel, given over-night, tying his head up to the rack, so that he cannot eat any thing, and half a dose of the common aloetic physic the next morning, three times repeated, will kill the worms, and bring them from the horse. *(To be continued.)*

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,—There is not a country upon our globe, which possesses greater facilities for agricultural improvement, than the United States of America, nor any one which offers so great advantage, to the industrious and prudent experimentalist.

Our ships, national and private, visit every clime, we have the unfettered, uncontrouled disposal of the produce of our labour, and for which we obtain higher prices, than any other nation.—I do not confine my views to the great staples of our country, grain, tobacco, cotton, and sugar; for the grazier, the orchardist, the gardener and ornamental planter, have yet a wide field for improvement, and much to learn from the thousand years experience of Europe, Asia, and Africa.

In France, and more so in England, it is rare that a vessel returns from a foreign voyage, without bringing to a beloved wife, to a father, a mother, a relative, friend, or perhaps public institutions, some rare or valuable animal, superior domestic poultry, birds for their voice or beauty, seeds of delicious culinary vegetables, trees deciduous or evergreen, shrubs and plants useful or ornamental, &c. &c.

From my earliest recollection, I have been much devoted to rural improvements, and may now boast, that my collection of hardy fruits, of every kind, of trees and shrubs, both useful and ornamental, most of which have been collected and propagated by my personal labour, cannot well be excelled by any *farm* in *our* country.—My collection has not been expensive, but has been made by steady industry, through more than forty years, yet strange to tell, but true as strange, that with the exception of one cork tree, and one Sicilian chesnut, I cannot point to a tree, or shrub, of foreign growth, presented by a travelled friend or acquaintance.

I am not disposed to impeach the taste, patriotism, intelligence, or industry, of my fellow citizens; I rather think that the neglect which I complain of, arises as much from indifference in our farmers, who live near to, and have frequent intercourse with our great commercial cities, as from inattention in our travellers. There has not been a clear understanding between these classes—perhaps I should, with more propriety, go to the fountain head, and impeach our national legislature, with a shameful disregard to the subject upon which I am treating.

The public land at Washington is so extensive, that thirty acres might be apportioned for a garden, in which to collect the various trees, shrubs, and plants, of our own, and every other country. The members of congress, coming from every section of our country, would not only most cheerfully assist to make a collection, but they would take home with them, the various seeds and plants, which a well managed institution would supply. Even now, do we not stand indebted to early enterprise, for all our grains, for our cotton, and sugar, for every good fruit, and for all our culinary vegetables? Are we not indebted to foreign nations for our horses, cattle sheep, &c. and can we be so vain, as to suppose that we have arrived at that state of perfection, which does not require further improvement?—In fruits we are extremely deficient, we have yet to find that apple, pear, peach, cherry, and grape, which is most perfect *in the particular section of the country in which we reside.* It is a fact indisputable, that the apple, (and no doubt other fruits,) which may be most valuable in one district, is good for but little in another.

The redstreak so highly esteemed in the neighbourhood of Baltimore, both for cider, and keeping, is with me a most worthless fruit. I have two fine healthy trees, which produce abundantly, their beautiful fruit, yet I have never been able to make a gallon of cider from them, or keep an apple to the last of November. It is the same with the cataline, and maiden's blush, they produce well, but rot immediately.—On the other hand, my newtown pippins are nearly double the size, keep equally well, and are thought to be much higher flavoured, than the pippin grown upon Long Island, where it originated.

If our ministers and consuls abroad, are wanting in taste and patriotism, they should be *instructed* to forward to the national garden, every production of the earth, which can benefit their fellow man; but fruits and forest trees, the seeds of grain, grass, and culinary vegetables, should be the first object. The improvement of our live stock, must be left to the enterprise of our merchants. For the horse, you already have my opinion, but with regard to the cow, I fear that we are carried away by mistaken prejudice, in favour of high prices. I have lately seen one, recently imported by Mr. John Riddle of New Castle, Delaware, at a very trifling expense; yet her size, form, and disposition to yield milk and meat, is quite equal to any thing, which I have seen—she is from some part of Germany.

Young cattle, from one to two years old, can be picked up in various parts of Europe at a trifling cost, and the expense of importation, (if owners, commanders, and supercargoes are so disposed,) will on a return voyage be trifling.

The purchaser for his guide, will have to judge from the general appearance of the stock, with which the animal is associated and in every sea port town of Europe, the cattle kept for the use of that town, are always the best, which the neighbouring country can produce, and possessing a specific (not an imaginary) value, for the dairy or shambles, they can always be purchased at that value, and it only requires judgment to select.

We yet want the celebrated Norfolk polled or hornless cattle, valued as hardy, and great milkers; they no doubt could be procured at fair prices. These polled cattle, would prove an acquisition, where many young horses are kept; in my time, I have lost a most valuable brood mare, and three fine young colts, by the goreing of cows.

I am partial to the deep brindle colour. At very distant periods of my life, I have recorded four beeves, decidedly superior to all others killed by me, both for proportionate weight, fineness and tenderness of grain, and mixture of fat; and when I find they were all brindles, in no wise related, and without having received more than my usual care in feeding, I am disposed to think there is something in colour. The opinion of your city victuallers, would perhaps be conclusive.

We want that variety of sheep, which produces the fine combing wool. It is reported that at the Texel, there is a breed celebrated for their great size, for their wool, and vast increase; and we have never yet seen among us, the immense sheep of Lincolnshire, England.

Of forest trees, we have many yet to procure, both useful and ornamental, and the everlasting teak tree of India, will immortalize the man, who will first introduce it in our country. A perusal of the remarks of Pering and Money, to be found in the Analectic Magazine, Vol 1. p. 263, will satisfy the reader, that there is a ship timber, of yet more value than the live oak of the south; but in the south, this invaluable tree must no doubt be planted.* Let it not be said, that many foreign trees will not suit our climate, we have climates for all trees, and they may be naturalized to colder and hotter climates than from whence they are procured. A cork tree, which in its wild state, is only to be found in hot climates, grows quite as well as any oak on my farm. The sweet gum or liquid amber, the holly, white, red and black oak, hickory, sassafras, black walnut, magnolia, &c. &c. grow from Maine to Florida I have eat of the pickled fruit from olive trees, which grew upon Cumberland Island, in Georgia, quite equal to any we import; the tree is large, healthy and beautiful.

I trust that the day is not far distant, when Congress will pass a law, for the improvement of a public garden at Washington, and for planting several thousand acres in Florida, with live oak, and teak. We are earnestly engaged in clearing our lands, and in a country where land can scarcely be called real property, (it so often changes owners,) we must not expect the same care and attention to plantations of wood which is customary in Europe. In England, it is thought so important, that liberal bounties are given for planting *private* property.

Timber land for national use, should have the nation for owner, it will then be unchangeable.—A forest need not as in Europe, be converted into a sinecure, or princely establishment. If a ranger is appointed, let his reward depend upon the number of growing trees planted; let him work, or at his own cost, have work done for his living; his account should show but one item, the number of trees *actually growing.*

New York, as in many other things, has set an example to all the states, by establishing a botanic garden. This example should be followed by every state in our union, with ground sufficient to plant out the varieties of fruits, and trees, and shrubs, and plants, which industry and taste can collect, and for a nursery to propagate all approved articles. The use of the ground, under proper restrictions, with a very moderate salary, would invite a skilful manager.

For the great commercial states, there cannot be any excuse, and I trust that Baltimore will not any longer neglect a scheme of such general utility, and of so little expense. Every merchant should instruct his captain or supercargo, to bring back with him, trees, shrubs, plants and seeds, nay animals, if they show superiority.

By this method, a few years of care, would establish a splendid garden, worthy the public notice and of general benefit.

Wheat, our great staple, has in general been imported from the south of Europe. I have been always more successful, when I have procured my seed wheat, from the north, than from the south; but not so with Indian corn, having never succeeded with northern corn, and more than once, have seriously suffered by the experiment. We do not want any better corn, than such as has been well proved in every state, and we do know, that with a little care, we may have it of any colour, flinty or mealy, long or short ears, many or few rows, and by careful selection, we may have an earlier or later variety.

But varieties of seed wheat, from the north of Europe, is extremely desirable, as well as fruit trees, vines, grasses, shrubs and vegetables.

Out of the one hundred and fifty varieties of pears, which the nurseries of Paris contain, sixty only are esteemed fine, but believing that soil, and climate, may change the quality of fruit, we should possess every variety which their nurseries afford, and you well know, that charging cost, freight, commission and insurance, they will come cheaper to you, than from an American nursery. In preference, let every thing of the kind, come by the fall vessels. Grapes in all their varieties, can be had for the trouble of bringing in.

Apples I do not think an object, because our native varieties are already immense, and are annually increasing; there is not a state or country in the union, which cannot claim its own variety of apple—I am endeavouring to make hedges from the apple pomace, and already discover new varieties of fair apples—peaches are desirable, fine as we have them. Within a few years, I have seen some from France, of uncommon size, beauty and rich flavour.

Of vegetables, we have many yet to procure, but at the same time we should use great caution to ascertain their properties, before they are too generally distributed. The star and blue bottle hyacinths, first planted in our gardens as ornamental bulbs, have become a destructive nuisance on many farms.

Wild garlic was first sowed by the Swedes, on the Delaware, for early pasture, and the late Judge James Tilghman, about 1790, imported by the name of sheep's fescue, two bushels of the hateful ripple grass, as a superior food for sheep, who, we now know, will not eat it.

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* *Respecting the live oak of Florida—see the description of Florida by Mr. Vignoles.*

All trees, shrubs and plants should be carefully packed and wrapped with matting or coarse canvass, during the voyage; should be protected from salt water, placed in that part of the ship which is neither very dry, nor very damp, and when they arrive in port, and are planted, should be protected from too much light; and I recommend that pine or cedar bushes should for two or three weeks be stuck around them.

Grass and garden seeds must have air, but as dry as possible, the more delicate kinds placed in brown paper bags, and hung up in the cabin, the more hardy kinds put up in common biscuit kegs; nuts, such as the large thin shelled walnut of France, the great chesnut, and fine hazlenut of Italy, the acorns of the cork tree of Portugal and Spain, and of the evergreen oak of England, may be mixed with earth in barrels, kegs, or boxes, and immediately planted on their arrival. The almond tree is equally hardy with the peach, and to insure fruit, should be planted to the coldest exposure we can command, to retard the bloom; but it is known that with us the shell is much harder than that of the imported fruit, and that nineteen times out of twenty, the kernel is bitter; budded trees of this fine fruit brought from the Mediterranean, would sell to great advantage, and benefit our country.

I am sir,
Your obedient servant,
F.

March 26*th*, 1823.

FOR THE AMERICAN FARMER.

BURNING SOD.

That agriculture in Maryland, has not proved profitable generally, is demonstrated by the desertion of many from our lands, and by the poverty of cultivators, although taxation is very light, and the owners possess slaves, and although almost every farm is near a navigable stream. What reason can be assigned for this, but that our land being worn out, will no longer yield as formerly. Corn and tobacco, have been our principal crops, and these require four ploughings, to bring them to maturity. Our rains fall very heavily, and the oftener the ground is turned over, the more of the fine particles of mould, are of course washed away—few farmers keep up their cattle, and of course little manure is made.

For many years, we have been leaving out old fields, cutting down our woods, and cultivating virgin soils, but these being now exhausted, families have been compelled to emigrate.

Mr. Beatson's pamphlet on clay or sod burning, has come most apropos, and promises to restore our lands cheaply, and expeditiously—I commenced his practice last year, and all my neighbours remarked, what benefit my corn received, by only putting one or two handfuls of burnt sod in every corn hill, before I put in the corn. I take up my pen now to inform you, of one experiment which has afforded me great encouragement, and which has determined me to devote the labour of two hands, exclusively, to clay or sod burning.—On a very poor spot, I perceived the corn only about two feet high, whilst the adjoining corn, was five feet; having been told, that manure, when placed between the corn rows, would improve the crop, as the roots would shoot into it when the corn began to tassel, I run a furrow between each row, and put in, and covered over the burnt sod—the result was, that this poor corn, became as good as all the rest. In the fall I ploughed in my wheat, and now the wheat where I put in the burnt sod, is so verdant and luxuriant, that you may distinguish it from the rest of the field, half a mile off—my neighbours have been surprised at the great difference, and calculate that it will yield twice or thrice as much as the adjoining wheat, although the soil last year was evidently richer.

The average of corn crops last year, on unmanured, and commonly cultivated fields, did not amount I fear to more than ten or twelve bushels to the acre, the cost of four ploughings and planting, cannot I think be estimated at less than seven dollars; if the price of corn, be three and a half dollars per barrel, the cultivator is nearly repaid for his labour, and nothing remains for wear of animals, and of implements, and for contingencies.

I calculate that two hands can make 140 bushels of burnt sod in two days, which are the most that can be advantageously put upon an acre—say that these 140 bushels, only double crops of corn, wheat, clover, &c. for only six years, and then consider the profit to make it clear, I will put down the expense and profit in an account.

ESTATE	Dr.	ESTATE	Cr.
To two hands for two days,	4	1st year, two barrels more corn,	7
Scattering the burnt sod, and hauling stumps and sticks.	3	2d year, ten bushels more wheat,	10
	—	3d year clover,	10
Days	7	Add the three following years,	30
			—
		Dollars	57

Let every one buy Mr. Beatson's book, and he will see, that my calculation is very moderate, and that it might be doubled on the credit side.

When I consider how many stumps and sticks, are left to rot in the woods, and to be washed into our rivers by rain, which might be converted into ashes, and to useful sod burning, I sigh at the loss of riches by ignorance—of this mode of making manure.

Three or four free negroes, who have used it on tobacco, and in their gardens by my advice, tell me that it has astonished them—my neighbour an excellent English farmer, has long practised it with success, and in gardening, he had last year several stalks of corn, in his garden, with six or seven ears. Think how by restoring worn out soils, we can support more cattle, &c.—and thus make stable manure, and then estimate the profit to landholders throughout Maryland.

When I cut down my wheat, I will give you a statement of the produce from the land manured with burnt sod in the rows, and from that adjoining not so manured. I hope that emigration will henceforth cease, till we are over populous, and that our lands will rise in value, and that prosperity will be exhibited by comforts and cheerfulness, instead of long faces, and complaints and sickness, which are now produced by bad harvests.—Your's respectfully,

THOMAS LAW.

P. S. I have not a fixed kiln, but carry my stumps and sticks to the place where I plough up the clay, to cover the stumps and sticks with it, and after setting fire to the sticks, I continue throwing on clods wherever the smoke comes out. The clods ought to be dry.

Diodorus Siculus says, that among the ancient Egyptians, one of the articles or conditions of their marriage contracts was, "the husband should be obedient to the wife."—We have often heard of Egyptian bondage, but never knew that it had been carried so far as this before.

AGRICULTURE OF TUSCANY.

EXTRACT FROM SIMOND'S TABLEAU.

[Translated for the American Farmer, by a friend in South Carolina.]

XI. SECTION. *On the Assolemens.*

The assolement, or regular rotation of crops, forms one of the most interesting parts of the agriculture of Tuscany; this rotation continues either during three years, and then the ground is planted five times; or four years, when it is planted seven times without ever being left in fallow.—The three year's course is as follows: 1st. Wheat followed by lupins in the Autumn. 2d. Wheat followed in Autumn by turnips, or any other forrage crop. 3d. Indian corn, millet or sagine, (Holcus Sorgum, Linn.) The four year's course consists of—1st. Wheat succeeded by French beans, (Haricots) intermixed with Indian corn. 2d. Wheat with lupins in Autumn. 3d. Wheat with forage in Autumn. 4th. Indian corn followed by millet or sagine.

XIV. SECTION.

On turning in lupins as a manure. As soon as the wheat harvest is finished, the ridges into which the land had been previously thrown are divided into two parts, and a small harrow which is called by the inhabitants *Spianuccio*, is drawn over each second ridge, while the other remains untouched until the whole field is passed over. The lupin lupinus albus, (Linn.) which is sown on the fields thus prepared, is a leguminous annual plant, which grows to the heighth of two or three feet, and requires no support; on the contrary, although its stalk puts forth a great number of branches, each is hard, strong, and of a very woody fibre; the flowers, which are of the size, form and nearly of the colour of those of the bean, are gathered together in large clusters at the end of each branch—and the long pods which succeed them contains the lupins, resembling large peas flattened. The lupins are planted in the month of August or September, on such of the ridges as have been harrowed, and are covered in with the hoe. The ordinary moisture of the plane is sufficient to make them germinate and grow; they are however, commonly refreshed by seasonable rains which assist their vegetation. The lupin is generally well grown by the month of October, which is the seed time for wheat, for which it is intended to prepare the land. When it has grown to the height of 15 inches, it is ploughed in, and left to rot in the land, possessing more than any other plant yet known, the property of fertilizing by the decomposition of its leaves. The same operation of the plough, which buried the lupin, prepares the ridge for the seeding of the corn, which is then covered with a hoe; this operation of burning the lupin to fertilize the earth is what is called by the Italians the sovercii or rovescii; it shows great knowledge of the best principles of Agriculture and succeeds wonderfully in fertilizing the earth. The peasants sow sometimes different plants for the same purpose, among others, they sow beans, but none rot so thoroughly or so fast as the lupin, nor possesses the power of fertilizing in so high a degree. When it is heated in an oven or large kettle, so as to destroy its vegetation, it becomes the most powerful of all manures; it is said that three or four pounds of these lupins, buried at the foot of an olive tree, or a fruit tree that is decaying, will restore it to all its health and vigor. Careful gardeners use it, but always in very small quantities, to manure their orange trees, instead of horse manure—and produce from it surprising effects.

XV. Section.

Harricots, or French Beans.

Sometimes instead of lupins which enrich the earth, such farmers as have an abundance of manure, sow after the 1st year, French beans which impoverish it. They are intermixed with some grains of Indian corn to support them, instead of sticks and branches. The kind of beans which bears the drought best, and is alone proper to be planted after the harvest, is marked with an eye about the germ, from which it is called faggiuole dall occhio. When these are planted, the course of cropping continues four years, because it is not until the year following, that in which the beans are planted, that the farmer can sow the lupin for fertilizing the earth, by burying which, is conceived by all to be absolutely necessary.

Second year. Fourrages.

After wheat harvest of the second year, the land is turned up afresh, in the months of July and August, and the forage crop is planted in September. The two kinds of forage crops most in use, are a mixture of lupins, flax, turnips, and the annual trefoil, or lupinella; it may appear strange to observe flax ranked among the forage crops, but its grain is very abundant, and easily gathered, the plant endures the winter extremely well, grows quickly, and furnishes an abundance of leaves, of which the cattle are fond. As the lupin grows much faster than the flax or the turnip, it is pulled up towards the end of Autumn. When it is well grown, and after being washed, it is given to the cattle who are fond of it—notwithstanding its bitterness. The flax and the turnips, which are choaked by its growth, prosper as soon as it is taken away; during the winter, these last are drawn as they are wanted. The flax is mowed in the spring, and towards the middle or end of May, all has disappeared. Among the turnips that are planted, not one half ripen, being relied upon, more for their leaves, than for their roots, in the nourishment of cattle. There are many varieties in Lucca; those that are cultivated are large and long, and of a yellow skin, such as the turnips, which are called English turnips. In the planes of Pescia, they are large, flat, and coloured red and rose, the produce of the seed removed from one place to another, does not resemble the plant from which the seed was taken.

In Parma and Milan, more turnips are planted, than in Tuscany; in the two provinces, with the exception of the rice fields, the assolemen is for two years, and consists of wheat, turnips, and Indian corn; or if it is prolonged to 3 years, it is in order to plant beans or turnips, twice in the course of the third year, for the purpose of burying them in the nature of the severcio. The prodigious quantity of turnips, which covers these rich provinces, must have been very agreeable to Arthur Young, when he travelled over them. The lupinella, or annual trefoil, (trifolium incarnatum, Linnæi,) is one of the most beautiful plants, which is cultivated as a forage crop; its beautiful carnation oblong flowers, the deep colour of its foilage, and the vigour of its vegetation, make it the ornament of the fields; it is planted in September, and mowed between the middle of April, and the middle of May, sometimes it is intermixed with lupins, which are taken up in Autumn, its forage is more abundant than that of the flax, but it is mowed only once.

Third year. Indian Corn.

After the forage crop is gathered in, the ground is completely turned up with the spade; this work is commenced about the middle of April and is continued during the month of May; the preparation of the ground with the spade, always precedes the planting of Indian corn, which constitutes the crop for the 3d year. It is planted during the three months of April, May and June, although it is sometimes planted as late as July, on moist spots, but there it is of a particular variety, which grows more quickly but produces less, and is called sessantino, because it ripens in sixty days. Indian corn planted in the plane, about the end of April, suffers little from drought provided it has rain about the beginning of July, which most commonly happens. The corn is planted on large ridges with hoes, and although it is scattered with a great deal of œconomy, more is nevertheless put in, than is suffered to remain—this is done to provide against the attacks of insects, which often destroy it, as soon as it begins to sprout—when it is out of harms way, the superfluous plants are taken out, and each plant is removed from the other about 10 or 11 inches on the rows, but each row is distant about 20 inches or 2 feet—it is moulded up twice during its growth; while it is growing it furnishes an abundant and excellent forage, of which the cattle are very fond. The Indian corn is a great resource to the people, and furnishes an excellent aliment. Mixed with wheat in bread, it gives the bread a redish yellow appearance, but does not injure the taste. The peasantry live chiefly on Indian corn, either in the shape of *farinata*, or *pollenta*. To make *farinata*, the meal is thrown into a kettle or porridge pot, containing boiling water, and seasoned with butter, oil, or broth, (couillon,) and salt; it is then stirred for 5 or 6 minutes, when the fire is withdrawn. It is served up as a soup, or thick couilli; the pollenta is made like the farinata, but without grease, and is more thick, so that in withdrawing it from the fire, it should be of a solid consistency; it is then cut with a thread, and placed on a gridiron over burning coals for some minutes. These two modes of using the Indian meal, have the advantage of rendering very little bread necessary; for this substance, without having too much taste, has nevertheless enough to render it palatable, without any other accompanying food. It is probable that it would be more nourishing, if it was better cooked, for the labouring people complain, that it fills them without strengthening them, while on the other hand count Rumford remarks that Indian corn, *well prepared*, is the most wholesome and nourishing of all grains.

Editorial Correspondence.

RYE AND OATS DESTRUCTIVE TO YOUNG FRUIT TREES—CORN AND POTATOES BENEFICIAL—HOW TO DESTROY VERMIN ON CATTLE, &c. &c.

Sir—I have lately read the extracts from Cobbett on gardening, published in the American Farmer, which afford much useful information on that subject.

Although he is generally correct, yet, in some few instances, I think him erroneous; which errors ought to be timely corrected. For instance, he recommends, amongst other crops to be grown in an orchard, rye, as one—but, in my opinion, no crop ever raised in an orchard (especially a young one,) was so pernicious as rye. Two or three crops of rye, grown successively in a young orchard, is almost as fatal as an axe would be to the roots.

When the rye is in blossom, a certain rank effluvia arises from it, which poisons the trees.

Oats is a bad crop, from the injurious effect it has on the soil.

Cobbett says, that ploughing or digging between young fruit trees, should only be done in the fall; but the fact is, that planting a young orchard with corn, and keeping the ground well cultivated, will bring on the trees more rapidly than any other plan; nothing will more promote the growth of a young orchard, than to plant it with corn or potatoes for seven years in succession, and have the ground annually cultivated, manuring round the roots of the trees yearly.

Gentle oxen is the best kind of team for ploughing an orchard: with a horse team, the ends of the swingle-trees are apt to bark the trees, unless they are well guarded by strong stakes.

Cobbett asserts, that the stones of fruit, never produce the same kind as the original, except by mere accident: in this opinion, I think he is not correct, notwithstanding it has been ascertained, by experiment, that if a dozen seeds, taken from one apple or pear, when planted and grown, will produce as many different kinds, and none like the original,—yet it is not so with stone fruit—if the pits [stones] of peaches, plums or cherries are planted, they will generally produce the kind from which they originated.

Cobbett ridicules the idea of any mixture or communication of vegetables or grain, without exception, from the farina; however, there are certainly exceptions to his rule on that subject—for instance, the mixture of Indian corn does proceed from the farina; as far as it blows and falls on the silk projecting from the shoot, so far you will find different kinds to mix. The fact is, that if a hill of corn be planted by itself, a sufficient distance from any other corn to prevent any of the fine farina, which forms on the tassels, from blowing on the silk, and the tassel of the hill is cut off before the frey or farina is formed, no grains or corn will grow on the cob.*

A N. CAROLINA FARMER.

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*The attention of a correspondent at Kingston, Tennessee, is requested to this, and if *facts* to the contrary have come under his knowledge, we should be glad to have them under the sanction of his name—with "A North Carolina Farmer" we are not acquainted.—*Edit. Am. Farmer.*

TO REMOVE VERMIN FROM CATTLE.

I have found that a strong decoction of tobacco, washed over a beast infected with vermin, will generally drive them away; it sometimes will make the beast very sick for a short time.

But a better remedy is to mix plenty of strong Scotch snuff, in train oil, and rub the back and neck of the creature with it, which will effectually kill or drive away all vermin from a quadruped.

Sir, if you think the foregoing, or any part of it, worth a place in your useful paper, you are at liberty to publish the same.

MIDDLESEX.

FROM A FRIEND IN VIRGINIA.

Saturday, 29th March, 1823.

I have, for some years past, raised a variety of water-melon, of a *very superior quality indeed.* I have distributed its seed very widely, through this neighborhood, and find it the opinion of every person, with whom I have conversed, who has tasted it, that it is *vastly superior* to any they have ever met with.

I obtained the seed of this melon about the year 1815, at which time I lived on the bank of the Great Kanawha river. It was sent to one of my neighbours there, by a friend in Richmond, who called it the "ice-rind melon."

I should have sent you some of its seed, a year or two ago, had I not taken it for granted that so excellent a fruit could not be raised more than a year or two in the vicinity of Richmond, before its reputation would be known at Baltimore, and its culture eagerly attended to by the agriculturists of that quarter. Upon reflection, however, I have thought this consideration ought no longer to prevent my sending you some of its seed, because if you have this melon amongst you already, the receipt of a small parcel of its seed from hence, can do no harm; but should it be that you have it not, I feel assured that any lover of fine melons, who obtains the seed, will consider it an invaluable acquisition.

It is a southern melon, and requires a long continuance of warm weather to bring it to perfection. I would, therefore, advise its being sown earlier than common, and protected by small boxes, covered with old muslin, as is recommended by your New York correspondent.

L. W.

P. S. My melons have degenerated a little, by other varieties being cultivated too near them. The purest seed are those without spots on their sides, having *only* a dark brown spot on *each side* of the *scar*, or what we farmers generally call the *eye* of the seed. Be so good as to request those who feel disposed to give them a trial, to sow them at a distance from any other melons, which will prevent their admixture.

GEOGRAPHICAL.

We have an hundred times laughed at the scheme of the British to build brigs of a 'peculiar construction' to ascend the cataract of Niagara, and so obtain the mastery of the upper lakes—than which a voyage to the moon in a coal wagon, was not less impracticable. The power of man, it is true, might convey a brig round the cataract; but that of all the men who ever lived, with the wealth of the whole world at command, could not cause a vessel to *ascend* it: yet we see that, (in a very interesting manual of New York, compiled by Mr. *Goodenow*), during the late war, a vessel on lake *Ontario*, was directed to proceed to *Onondaga Hollow*, there to receive a parcel of cannon balls, and thence convey them to *Rome*, where the cargo was to be discharged! We are not told by whom this wise order was issued—but, as the fact is gravely related, we have ceased to laugh at the idea of *sailing up* the cataract of Niagara!—the American exhibition of ignorance being less excusable than the British.

Now, this was only about, or less than ten years ago. What was then a wilderness in New York, has 2 or 300,000 inhabitants—and the lands wrested from the forest are cover with flocks of sheep and herds of cattle. In parts where the wolf, at that time, had his home, and the wild deer bounded as on his own soil, one thousand men, fit for battle, may be called together by the spirit-stirring sound of a drum. The voyage from the city of New York to the city of Detroit, is now enjoyed as a pleasurable excursion, and Michilimackinac is visited by those who have a few days' leisure and an inclination to 'see the world' The great lakes *Onturio*, *Erie*, and *Michigan*, have become familiar, like the Chesapeake bay; *Huron* is already pressed with the burthen of commerce, and *Superior*—

——————————" *the pool,*
" *In which we might souse Britain's island, whole.*"

will soon have her packets for the transport of men and goods. The wilderness is conquered, and the busy hum of industry has succeeded the whoop of the wild inhabitant of the woods. By the power of steam, the city of New Orleans seems as if in the neighbourhood of the Falls of St. Anthony, and the Saut de St. Marie is about to be within the common range of the trade of New York! The Rocky mountains are as if in view at St. Louis; and St. Louis, that seemed as the uttermost point west, now in free communication with Baltimore, has opened a trade with the internal provinces of Mexico' A settlement at the mouth of the *Columbia* has been seriously advocated in congress, and will soon be made under the sanction of government; and, in a few years, we may expect that some persons *there*, feeling themselves too much crowded, like, 'Leather Stocking' in the 'Pioneers,' will seek a country more *west*—Japan, perhaps, if good hunting could be expected therein! The history of the famous col. Boone is the history of thousands of his countrymen. The no less celebrated gov. Shelby, of Kentucky, the venerable and the brave, has, and yet lives on, a most elegant estate which he discovered when in chase of a buffalo, after he had arrived at manhood. The progress of the state of *Ohio* is even more extraordinary—she has outstripped all calculation, and stands the fourth in representative power.—*Niles' Register.*

* * *

It is said to be a specific for the Rheumatism, to apply a cabbage-leaf to the part affected.—Choose a perfect leaf, cut off the protuberant stalk on the back, and place it on the part with a bandage of flannel on going to bed. It will produce a local perspiration, and in two or three repetitions a cure will be effected.

* * *

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

Baltimore, April 7th 1823.

A report of the tobacco inspected at, and delivered from Calhoun's Inspection Warehouse, during the quarter, ending on the seventh day of April, in the year of eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	803	19	166	hhds. 969
Number delivered.	2262			2262

RICHARD MACKALL, Inspector.

TREASURY OFFICE, ANNAPOLIS, April 9th, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at, and delivered from Sheppard's Inspection Warehouse, Baltimore, during the quarter commencing the sixth day of January eighteen hundred and twenty-three, and ending the sixth day of April, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	269		30	hhds. 299
Number delivered.	961	3		964

LANCELOT WARFIELD, Inspector.

TREASURY OFFICE, ANNAPOLIS, April 9th, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco Inspected at and delivered from Smith's Inspection Warehouse during the quarter commencing on the first day of January, eighteen hundred and twenty-three, and ending on the thirty-first March, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	149		23	hhds. 149
Number delivered.	241			241

RODERICK DORSEY, Inspector.

TREASURY OFFICE, ANNAPOLIS, April 7, 1823.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

Prince George's County, April 7th, 1823.

A report of the tobacco inspected at, and delivered from Queen Anne Inspection Warehouse, during the quarter commencing on the seventh day of January, in the year eighteen hundred and twenty-three, and ending on the seventh day of April, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number in spected.	56			hhds. 56
Number delivered.				10

WELLS & TYLER, Inspectors.

TREASURY OFFICE, ANNAPOLIS, April 9th, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of tobacco inspected at, and delivered from Nottingham Inspection Warehouse, from the first of November, eighteen hundred and twenty-two, to the first of April, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Reinspected.	Total.
Number inspected.	48			hhds. 48
Number delivered.	310			310

BADEN & BOSWELL, Inspectors.

TREASURY OFFICE, ANNAPOLIS, April 7th, 1823.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

THE FOUR P'S.

M. Pontac, a French magistrate of great abilities, but extremely indolent, having retired to his country seat, to divert himself during the summer season, a suitor went to him to solicit a final determination of a cause which had been many years protracted. He arrived just as the President was going to mount for the chase. M. Pontac being of a facetious disposition, bade him stay till he came back, and in the meantime to amuse himself with finding out the meaning of the letters that were over his gate, namely—four P's.—When M. Pontac came back from the chase, he found his dangling suitor. "Well, my friend," says the Judge, "Have you made out the inscription?" "Yes, my Lord, that I have." "Aye, well, what is it?" It is *pauvre plaideur, prenez patience.*—(Poor pleader, pray have patience.)—The real signification of the letters was *Peter Pontac, Premier President*; but M. Pontac was so pleased with the new turn ingeniously given to them, and so admonished by the reproof it conveyed, that the cause was decided next day.

FOR THE AMERICAN FARMER.

AGRICULTURAL ENQUIRIES.

Harrenton, N. C. April 8.

Would you be good enough to make enquiry through the Farmer, for the best mode of preparing mustard for table use, from the seed—the process of cleaning it from the husk—as that which comes for sale, is so much adulterated, as to be useless—such information I doubt not, would be highly acceptable to many of your country subscribers. G. A.

* * *

MR. SKINNER,

Be good enough to correct an error in my communication, as published in the Farmer, No. 2, vol. 5. For "I have had 30 *bushels* corn, 33 cart loads pumpkins and 5 loads of cymblins, off five acres, &c." read "30 *barrels* corn, &c." A.

THE FARMER.

BALTIMORE, FRIDAY, APRIL 18, 1823.

☞ The Printer assures us, that we may confidently promise the Index to the fourth volume, to go along with the *sixth* number—and we trust it will be found ample and satisfactory.

* * *

☞ Note on Mr. Law's communication on burnt sod.—We should suppose that for this purpose a permanent kiln might be constructed at a very trifling expense—such as has been in use for several years at Harewood, Mr. Oliver's estate in back river neck. This contrivance is highly worthy of the attention of thousands of farmers on our river shores, where immense masses of oyster shells have been lying in heaps and rotting, since their contents were devoured by the rude native lords of the soil, some hundred years ago. This kiln is dug out on the side of a hill—the shells and brush wood, old rotten trees, fence logs, &c. are brought, and with the shells, deposited in the kiln from the upper side of the hill, and are withdrawn and carted off from the bottom of the kiln on the lower side. The kiln is of the shape of a common copper kettle or boiler—was dug out by an Englishman, for ten dollars—has neither brick or stone work about it, and will burn one thousand bushels of shells at a time; supposing that from the side of a copper kettle, a narrow slip to be cut out perpendicularly, and you have the shape of the kiln, the sides of which bake harder and harder, the oftener it is used—a little caution is used in the beginning, to preserve a vacuum under the bottom of the kiln to promote the burning, and the whole operation is conducted by the farm hands, at an inconceivably small expense of time and labour. This simple and yet highly important manure-manufactory, is of Mr. Oliver's own suggestion, and would of itself, entitle him to the thanks of thousands, who might avail themselves of it, to restore the fertility of immense tracts of river shore lands, which being the first settled is the soonest exhausted.

The entirely new and beautiful aspect given to Harewood estate within a few years, would exceed the belief of those who knew it only in the wild, wasteful and barbarous condition in which it was when purchased by the present proprietor; and it is obvious that its melioration is the work of new and spirited plans of improvement, struck out and practised by him, and is not attributable alone to his ample means.

It is there alone, and on a large scale, that we have seen the operation of *paring and burning* actually and advantageously *going on*—whereof we read so much in, but get only an idea from the English books. Our calculation on the spot was, that in the manner in which paring and burning is there conducted, with a *rapidity* that surprised us—each acre afforded as much manure as would dress four acres well for turnips.—We should be glad to describe the process as we have witnessed it, but we are, just now, pressed for time and space.

SEED RECEIVED FOR DISTRIBUTION, SINCE LAST NOTICE.

Variety of the best muskmelon seed, from C. E. Rowan, Esq. Charleston, S. C.

Ice-rind water-melon seed, from L. A. Washington, Esq. Winchester, Va.

Early golden corn, from Brazil, from Mr. Brown—Baltimore.

LATEST NEWS.

FROM FRANCE—DIRECT.

New York, April 15, *noon.*

The elegant fast sailing ship HOWARD, captain Holdrege, arrived yesterday morning, from Havre, having sailed on the 14th ult.

PARIS, March 9.—The Duke of Reggio has this day taken his leave of the King, and sets off to-morrow to take the command of the first corps of the Army of the Pyrennees at Bayonne.

A vast number of young men from La Vendee, yesterday waited upon their Deputy, M. Manual, who had been expelled, and forcibly dragged from the Chamber of Deputies—who appeared deeply affected at this mark of their attachment.

Extracts of letters from Havre, March 12.

"Many people not believing that this government really intend going to war with Spain, speculation has become quite cool of late, and the market in consequence dull, the holders of produce not being disposed to give way.

Prices are about the same as at our last dates, except for cotton, which coming in freely from your ports, has been sold in some instances at a reduction of five centimes—and one lot has been sold this week at 30 which the brokers say was worth 32 some time ago. Our imports in February were heavy. The arrivals this month are four vessels from New Orleans with 3143 bales.—Our present stock may be stated at 17000 bales, chiefly American."

We learn verbally by the Howard, that so strong was the expectation of war between France and Spain, that insurance on French vessels from the West Indies could not be effected in France, and that the French merchants were paying 25 per cent. at Lloyd's, on their homeward bound West India trade.

We also learn, that all the French men of war are fitting out as fast as possible, and that immediately on the arrival of a French merchant vessel, the seamen are sent on board the men of war. A squadron was fitting out at Rochfort, to cruise on the coast of Spain, which was expected to be ready for sea about the 1st of April.

Capt. Holdredge has brought dispatches for Government, from Mr. Gallatin, our Minister at Paris, which were stated to be important.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 50—Howard st. Superfine, $7 25—fine do. $6 75—Wharf, do. $7 to 7 12½—Wheat white, $1 55 to 1 60—Red do., $1 50 to $1 55—Rye, 80 cents—Corn, 60 to 63 cents—country Oats, 50 to 55 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3 to 3 50—Herds' Grass do. $3—Timothy do. $4 50—Millet, $3—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb—Eggs, 18¾ cts. per doz.—Hay, $18 per ton—Straw, $11 to 12.

MARYLAND TOBACCO.—In demand; fine yellow 20 to 35—Good do. 16 to 18—Fine spangled 16 to 18—Fine red, 8 to 12—Good do. 5 to 7—Common do. 3 to 4½—Second, 1½ to 5.

TO THE FARMERS OF MARYLAND AND VIRGINIA.

CASTOR BEANS, OR PALMA CHRISTI.

A large quantity will be wanted at this place, as soon as they can be gathered, for which $2 50 per bushel, (each bushel to weigh 45 lbs.) will be paid in cash. The crop to be delivered monthly, or semi-monthly. Letters to J. D. Rogers, will be duly attended to.

Washington City, April 10th, 1823.

AGENTS FOR THE AMERICAN FARMER.

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AGRICULTURE.

FROM THE NEW ENGLAND FARMER.

PREMIUMS

Offered by the Essex Agricultural Society, in 1823.

The committee of the trustees appointed to propose objects for premiums, adverting to the original design of the institution—the improvement of the general husbandry of the county—have thought it advisable, at this time, to depart materially from what seems to have been a leading principle in all the agricultural societies of the country—that of offering primiums chiefly for certain specific articles of husbandry, instead of the combined improvements of entire farms.

Since the formation of the Essex Society, specific premiums have produced valuable effects; by demonstrating, that with high manuring, and good culture, some former usual crops may be doubled, trebled, and even quadrupled. But the important question is—*not what small lots in or near market towns, and abundantly supplied with manures, may be made to yield; but how the productive powers of* farms *can be essentially increased——and this can be effected only by a better management in all articles of husbandry.*—With this in view, the committee propose to *extend* the encouragement heretofore given for *general* improvements; and offer the following premiums:

I.—MANAGEMENT OF A FARM.

For the management of a farm, in its tillage, mowing, orcharding and pasturage: the quantity of land appropriated to each—their cultivation—the means and the manner of making, increasing, preserving and applying manures——their quantities—the respective crops and products—the quantity and management of the live stock—and the quantity of labour employed—to be detailed.

For the best - - - - - - - - - - - -	$30
For the second best - - - - - - - - - -	25
For the third best - - - - - - - - - -	20
For the fourth best - - - - - - - - - -	15

II.—DAIRY STOCK-SOILING.

For experiments in feeding milch cows on green crops, from the middle of June to the middle of October, by supplying them to the full with those crops, in their stables, without turning them to pasture. Feeding cattle in this manner is called *soiling*.

For the best - - - - - - - - - - - - -	$20
For the second best - - - - - - - - - -	15
For the third best - - - - - - - - - - -	10

The whole process to be detailed.

REMARKS.

The green crops may be rye (sown the preceding year) oats, barley, millet, Indian corn, clover and various grasses. Any sorts of grain sown to produce fodder for soiling, after being harrowed in, should be rolled, to make the surface and the ground smooth for mowing. The clover and upland meadow grounds, destined for soiling, will be better for rolling, with a heavy roller, to make a smooth bottom, without which the mowing cannot be close; and if not close shaven, the thickest part of the grass will remain uncut.

If the soil be rich and the surface smooth, the grass may be cut when only three or four inches high, and will then yield a good swarth. Such ground well set with the grasses which produce what is known among us as English hay, and inclined to moisture, may in this manner be mown three or four times in a season. The cutting of the rye, oats, barley and millet should commence as soon as they will yield a good swarth, and be finished before they have passed the flowering state. If mown before they flower, they will shoot again; and if the growth be rich, yield second crops.

Indian corn will be well grown for soiling by the 10th or 15th of July; and will continue green, and in full sap until the last of August. And in order to continue a supply of this rich, green food—to which probably no other vegetable of our country is equal, especially for milch cows—pieces of land may be planted in succession, so that some may be in full sap to the last of September, when, in Essex, frosts usually strike the blades, and greatly lessen their value.

If there be a piece of rich mowing land in the farm, its second or third crop will furnish green fodder to the middle or last of October. Perhaps late sown oats, hardier plants than Indian corn, may supply the place of grass. Pumpkins, also, during this month and the next, will furnish a most valuable food.

All the sorts of fodder above mentioned, like the young grasses of the spring, naturally dispose cattle to a degree of looseness, though probably without injuring them. But if any of them operate to an excess, a little good hay will furnish a useful corrective.

After November, potatoes, mangel wurtzel and carrots, added plentifully to their dry fodder, even if this be only barley, or oat straw, or wet or low ground meadow hay, will doubtless keep cows in milch till within a few weeks of their calving.* Cows, during the time of their going dry, and other stock at all times, fully supplied with ruta baga, or common turnips, with the same poor dry fodder, may be kept in high condition. In England, cattle intended for beef are often fattened on wheat straw and turnips, giving of the latter as many as they will eat. They commence feeding in this manner in autumn, and by the spring the cattle are fat for the market. The cattle thus fattened, and in so short a time, are of moderate sizes.

Rye, oats, barley and millet, when destined for soiling, should be sown twice as thick as when intended to ripen their seeds. In like manner, Indian corn may be planted in continued rows only so far apart as to admit a small plough in its culture, and with the plants only four or five inches apart in the rows. The surface of the ground should be smooth in the rows, so as to admit of mowing the corn.

The farmer who shall pasture some of his cows, and soil the others, will add to the value of the experiment, by keeping their milch separate, and noting their relative quantities from cows of equal goodness, and the quantity and quality of the butter made from each set.

III.—THE DAIRY.

For the greatest quantity of good butter, in proportion to the number of cows producing it, (not fewer than four) made on any farm, from the 20th of May, to the 20th of November, twenty-six weeks, and the quantity of butter averaging not less than seven pounds per week for

each cow, - - - - - - - - - - - - - -	$20
For the second greatest - - - - - - - -	15
For the third greatest - - - - - - - - -	10

The kinds of food and the management of it to be detailed.

REMARKS.

The object of agricultural institutions, as already observed, is *improvement*; and in Essex, none seems to be more wanted than in *milch cows*. If the society were to continue their premiums, during any length of time, merely for the greatest quantity of butter, they would not enforce any improvement in the quality of those animals. Seven pounds of butter a week, for each cow, is less than half what the Oakes cow of Danvers produced, in the same time. The seven pounds a week, therefore, are very attainable by every farmer who will *improve his breed of cows*, and *feed them to the full* with juicy and highly nourishing food. The committee trust they do not entertain a groundless hope, that the premiums here offered will have claimants; and that in some future years, the trustees will be justified in confining these premiums to cows yielding ten, twelve, and fourteen pounds of butter a week, for twenty-six weeks in the year.

IV.—TURNING IN GREEN CROPS AS A MANURE.

For the best experiment of turning in green crops as a manure, on not less than one acre - - - - - - - - - - - - -	$15
For the second best - - - - - - - - -	10
For the third best - - - - - - - - - -	5

REMARKS.

The claimants must give a particular account of their respective processes, and the results.—The object aimed at is to ascertain whether land can be manifestly improved by turning under green crops, and to what degree enriched. Each experimenter will follow his own judgment in his process; but the following intimations may merit his attention.

The turning in of green crops is a very ancient, though not a very general practice. Its utility has lately been called in question. Hence the desire to bring it to the test of fair experiment.

Take an acre of land, so far exhausted at the last crop as to render it inexpedient to introduce another without a good manuring. Plough it in the spring, and sow it with oats, barley, buckwheat, or millet—and not be sparing of the seed. When the crop shall be full grown, but still in blossom, plough it in, and sow it again. When this second crop shall be full grown, plough it in. The next year repeat this process—again ploughing in two crops; the last by the beginning of October. It may then be sown with winter rye, to produce a crop of grain at the next harvest—sowing five or six pecks, because sown so late. Or it may lie till the ensuing May, and then be planted with Indian corn. The product, compared with the last of the same acre, prior to the commencement of the experiment, especially if a crop of the same kind, will show the value of the green crop ploughed in.

ANOTHER MODE.

The acre being divided lengthways into two equal parts, plough the whole uniformly in the spring. Sow on one part two bushels of oats or barley, or a bushel of buck-wheat, or three or four half pecks of millet; and harrow the whole acre alike, and so as duly to cover the seed which has been sown. When the crop has attained its full growth, but is still in blossom, plough it in; ploughing the vacant half acre at the same time, and to the same depth. Sow the first half acre again immediately, and harrow in the seed, harrowing the other half in the same manner. The next year repeat the same process. Then the whole acre may be sown with winter rye (3 pecks on each half;)

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* *An observing farmer, long ago expressed to me the opinion, that cows should go dry five or six weeks before calving, to give time for the milk vessels to be distended, and the bag enlarged; in the language of farmers, for the springing of the bag. It was his opinion that the greater increase of milk after calving, would amply compensate the loss of going dry so long.*

or the land may lie (as in the process first proposed) to be planted with Indian corn the ensuing spring. In the third year, the crop put in must stand to ripen. The produce of each half acre, (both being sown or planted, and cultivated in the same manner,) must be kept by itself, and accurately measured. The difference between them will show the value of the green crops ploughed in.

Every experimenter will perceive that no manure whatever is to be used—the crops sown, and the weeds ploughed under, excepted.

Until ploughs constructed for the purpose of completely turning in green crops shall be introduced, it will be necessary to roll flat the green crop before ploughing, or it cannot be duly covered. Perhaps a small roller, or what is called a *foot*, only of a large size, may be attached to the fore end of the plough beam, to press down the crop to the ground, and thus cause it to be effectually covered. Such a roller, or foot, will serve as a gauge for the depth of the furrow in which the crop shall be buried.

V.—CIDER.

For the best cider, the pure juice of the apple, which shall be made in the present year, not less than eight barrels	$10
For the second best	5

The greater part of the cider may be sold, if the owner please, only reserving one cask, of which a sample is to be produced at the Society's public exhibition in 1824; with good evidence that the casks sold were equal to that reserved. If sold, the claimant will state when, to whom, and at what prices; and describe his whole process in collecting, sorting and keeping the apples, in making the cider, conducting the fermentation and fining, if any artificial fining be used, and in preserving the cider in the cask.

For some information of an eligible process in making and managing cider, the committee refer to the intimations contained in the explanatory observations subjoined to the list of premiums for 1821.

VI.—FOREST TREES.

The same premiums that were offered in 1821 and 1822; to which intended claimants are referred. And they are desired to give notice of their proposed claims to the secretary, John W. Proctor, Esq. in Danvers, before the first of July next.

VII.—POTATOES.

Numerous experiments have been made, to increase the products of this root, and premiums have been awarded for the greatest; but no measures for improving their *qualities* have fallen under the observation of the committee. It is well known that the seeds in the *apples* or *green balls*, which grow on the tops of potato stalks, will produce potatoes, which, planted for one year, and their produce a second year, will yield well sized potatoes. It is from these small seeds that all the varieties of potatoes have been produced. It was in this way that a distinguished farmer in Ireland—a country so famous for the culture of potatoes—obtained excellent kinds. From the numerous seeds in every ball, a variety of potatoes may be expected; some early, some late in ripening—some yielding small, and others abundant products—some watery, and others mealy and well flavored.

Expectations have often been formed of raising potatoes of the best qualities, by planting those brought from the British isles; but disappointment is the common result—the products of the first year have scarcely borne a resemblance to the fine originals. It is very possible, and not improbable, that some sorts superior to any in cultivation among us, may be obtained from the small seeds found in the green balls. To encourage the necessary experiments, the following premiums are offered:

For the best and most valuable potatoes, taking them for all in all, raised from the seed of the apples or green balls, samples of which shall be produced at the society's public exhibition in 1825	$10
For the second best	7
For the third best	5

The claimants are to detail their whole processes, and state the results.

REMARKS.

Some sorts may be of superior excellence for their mealiness and flavor, but moderate in their product; some not so well flavored, may be very abundant in quantity, and highly valuable for feeding live stock; some very early ripe; some growing compactly, and so expeditiously harvested. The sorts which, combining most of these good qualities, shall be judged the most valuable, will be preferably entitled to the premiums, without excluding claims for potatoes of highly superior goodness, although less productive. To facilitate the execution of these novel experiments, the committee offer the following

DIRECTIONS.

The experimenter, having determined with what sorts of potatoes he will make his trials, will gather the balls when the stalks, by their drying, indicate a ripeness in the seeds; and if they are not quite soft, so that the seeds will easily separate from the pulp, they may be laid by (out of the way of frost) until the pulp becomes soft. Then mash them with the hand, and with the aid of water, separate and wash the seeds clean. These, being dried, may be preserved like garden seeds, until the ensuing spring. Then sow them in rows, in a bed of rich garden earth, just as small garden seeds are sown. The rows may be ten inches apart; and the plants, when grown enough to be thinned, may stand four or five inches asunder.—Keep them clear of weeds, and stir the earth between the rows. The supernumerary plants arising from the thinnings, may be transplanted if needed, to another bed.

In autumn, or when the stalks become so far dried that the roots cease to grow, dig these up carefully, so that the potatoes growing on the same plant may be saved by themselves; for it may happen that each distinct plant may produce a sort different from the rest. The bulbs, or roots, of the first year, will be very small. In the next spring, choosing a piece of rich ground, plant each sort in a hill by itself. The product of this year will furnish bulbs big enough to be boiled. And this will be the time for selecting the best. Many sorts may not deserve any further attention; but some may be of excellent qualities, as to time of ripening, texture, flavour and productiveness. Their several qualities should be carefully noted; and again be separately preserved and planted another year; when they will probably have attained all the perfection of which their natures admit.

Lancashire, a western county of England, as well as Ireland, is distinguished for producing good potatoes. Ireland is remarkable for the moisture of its climate; and the western is more moist than the eastern coast of England. Both are many degrees farther north than Massachusetts, and are exempt from the burning heats and droughts of our summers. These circumstances suggest the propriety of our planting potatoes on moist and cool grounds; thus assimilated, in some measure, to the soils of Ireland and Lancashire.

VIII.—PLOUGHS AND PLOUGHING.

Some ploughs are of easier draught and make better work than others; and some oxen draw or plough extremely well without a driver. The design of ploughing matches, is to attain all possible perfection in both. The premiums, therefore, under this head, will be confined to efficient ploughs of easiest draught, drawn each by one yoke of oxen without a driver, ploughing one quarter of an acre, and turning the best furrow, at least five inches deep, and in the shortest time compatible with the continuance of the labor to complete the ploughing of an acre, if that were required.

For the best plough, team and work	$15
For the second best	12
For the third best	8

IX.—SUMAC.

The premium for this article is continued of course, as the claim is to be presented the ensuing autumn.

GENERAL REMARK.

The committee repeat—and desire it may be remembered—that premiums claimed are not to be awarded, unless the subjects of the claims are decidedly meritorious. That is, the respective experiments must be so conducted as to exhibit results worthy of encouragement and imitation—or decisive of a question of which the solution is sought.

Where a premium has heretofore been awarded to any person, he is not to receive another for the same object. And where any plough has obtained a premium, another is not to be awarded for the same plough, nor for one of the same mould. Some important improvement can alone justify an appropriation of the society's funds, in cases of this nature.

To allow time for enterprising farmers to make preparations for becoming competitors for the premiums now offered, the committee are of opinion that there should be no public exhibition in the present year. The disposable funds of the society will thereby be increased, to reward successful candidates for premiums the year following. But whether there shall, or shall not be a public exhibition in the present year, the society, at their approaching annual meeting, will determine. As, however, some claims were to be made in the present year, these may be sent to the secretary of the society, to be laid before the trustees, for their decision thereon.

The committee propose no premium for the greatest quantity of any kind of crops. The experiments already made, have demonstrated what is practicable; and if those known examples of success are insufficient to stimulate general exertions, the usual premiums must prove ineffectual.

Essex, not being a county for grazing and fattening cattle much beyond the farmer's own wants, this article also is discontinued in the list of premiums.

As to the usual live-stock—working oxen, milch cows, young cattle, sheep and swine—they are to be considered as comprehended in the management of a farm, additionally to the provisions under the heads No. III, and No. VIII, relating to the dairy and ploughing matches; and to the following article.

X.—FOR IMPROVING OUR NATIVE BREED OF NEAT CATTLE.

The first most celebrated breeder of live stock in England, was the late Robert Bakewell; to whom, Mr. Arthur Young says, that country is indebted for *just principles of breeding*. And a later eminent breeder says, that "before Mr. Bakewell's days, we had no criterion but size;

nothing would please but elephants and giants." And he declares "that Bakewell enabled those who followed his ideas, to produce two pounds of mutton, where only one was produced before." The following were the points to which Bakewell specially attended: "fine forms, small bones, and a true disposition to make ready-fat: which, indeed, is inseparable from small bones, or rather fine bones and fine forms, or true symmetry of the whole."

But Bakewell's prime object, in improving cattle and sheep, was to render his animals most profitable in *beef* and *mutton*. And he succeeded in obtaining forms indicating *strength of constitution—a disposition to fatten, and at an early age—weightiness in the most valuable parts—with lightness of offals*. If there was deficiency in any point, he would cross his animal with one that was amply supplied in that part; and if any point of his animal was too heavy, by an opposite cross he would reduce the superfluity. By such management, diligently pursued, he, at length, gave to his stock the shape and qualities he desired.

So far as we breed domestic animals in this county—and the observation will apply to our whole state, and generally to all New England, we must extend our views beyond *beef* and *mutton*—and with the former combine *milk*, *butter* and *cheese*, and a fitness for *labor*—and together with *mutton*, aim at the greatest quantity of the *most useful wool*.

If Bakewell could alter the shape of his cattle, and lay flesh and fat on the most valuable joints—as was the fact,—can it be doubted that, by similar attention, the quantity and quality of the milk of our cows may be increased and enriched? But to obtain this improvement, calves should be raised from such cows only as excel in these two particulars.

It seems to be the best opinion, that of the different breeds of live stock, those of the largest size are not the most profitable. The breed of cattle, however, should be such as to produce oxen, a single pair of which, at their full growth, should have strength sufficient, on proper tillage land, with well formed ploughs, to open a furrow to the depth of five, or even of six inches. As to the form of the different kinds of live stock, an eminent naturalist and farmer in England has thus expressed his opinion: "The more deep and capacious the chest, and the shorter and lower any animal is, relative to its weight, the better adapted it will be to live and fatten on little food, the more labor it will go through; and I have always found the most short-legged oxen to be the best laborers."

The foregoing rules of breeding, and description of good live stock, being the result of the experience of eminent English farmers and breeders, merit the particular attention of all who shall attempt to improve upon our present races of domestic animals; and are here introduced to furnish them with useful information. And in the hope and expectation that such improvements will be undertaken, the following premiums are offered:

To the person who shall produce at the public exhibition of the society, in the year 1828, any number of milch cows, not less than four, of our native breeds, showing manifest improvements therein, by an important increase in the *quantity*, and maintaining, at least, if not improving, the *good quality* of milk—the latter to be tested by the quantities of butter made in the six months next preceding the exhibition—

For the best - - - - - - - - - - - -	$30
For the next best - - - - - - - - -	25
For the third best - - - - - - - - -	20

For the best pair of working oxen, or well trained steers, improved on the principles above stated, and exhibited at the same time—

For the best pair - - - - - - - - -	$20
For the second best - - - - - - - -	15
For the third best - - - - - - - - -	10

It will readily be admitted that our live stock demand great improvements; and no one will question whether such improvements are practicable. They ought then to be attempted. It will avail little to bestow premiums merely for the best that shall be produced; for such premiums might be given for a century, without effecting any real improvements; and thus, as to live stock, defeat the object for which the society was formed. The known excellency of some oxen and cows, of our native breed, give assurance to judicious and enterprising farmers, that their numbers may be multiplied by observing the well-tried rules of breeding. The Oakes cow has probably not been surpassed in any country. By some she was judged to be under the size of our common cows. Her short legs probably gave rise to that opinion. There are, however, many larger cows in the county.

The best bulls and cows do not always produce a progeny equal to the parents: but experience has shown, that from such only the highest improvements may be expected. The same observation applies to all other kinds of live stock.

Farmers who shall effect great improvements in live stock, while they render a lasting benefit to their country, will lay a foundation for advancing their own interest, in the demand, and consequently increased prices, of their improved breeds.

Reflecting farmers, who shall become candidates for premiums, will be aware, that if their exertions should not obtain the honor of a prize, they will not pass unrewarded; as all the improvements they make will either give them immediate profits, or add to the value of their farms. The direct object of premiums is not to excite merely trials of skill, but to add to the solid interests of farming; and he, who shall show how we may add most to that solid interest, will obtain the highest prize.

In behalf and by order of the committee,

T. PICKERING.

Salem, Jan. 22, 1823.

TO THE EDITOR OF THE AMERICAN FARMER.

ON THE WATER CULTURE OF RICE.

Poplar Grove, 13 miles from Charleston.

DEAR SIR,

You will no doubt be pleased to receive the enclosed from the pen of Gen. Thomas Pinckney, on the subject of rice planting, the most important staple of South Carolina. The system of water culture, as explained in the essay, is one highly approved, and extensively pursued by some of the best planters in the state; particularly, and *successfully*, by your friend, C. E. Rowan, Esq. from whom I received the pamphlet for transmission.

Your's,

WM. F. REDDING.

A letter from THOMAS PINCKNEY, ESQ. to the Agricultural society of South Carolina, on the

WATER CULTURE OF RICE.

Charleston, 12th December, 1810.

DEAR SIR,

Having last year made an experiment, on a small scale, of cultivating rice, in a manner which I believe, has not heretofore been practised in the United States, and having this year repeated the experiment, much more extensively, with such a degree of success, as, in my opinion, to warrant further trial, I am induced to request the favour of you to lay before the society the following account of the method pursued, with its result.

I have taken pains, for a considerable time past, to obtain correct information concerning the production of this grain, in countries where, in consequence of its long establishment and extensive use, I was induced to believe that experience must have suggested the most advantageous mode of culture; and I observed in the course of this investigation, that the practice of those countries differed considerably from our own; particularly in the application of water: for I found that in them, rice was generally sown and grew to maturity in land continually inundated to a greater or less depth; except during the short intervals necessary for occasional shifting the water. I, therefore, determined to endeavour to ascertain what advantage that method might possess over the practice which generally prevails among us of keeping our rice-fields dry for a considerable portion of the first half of its growth.

Various accidents, to which the state of agriculture in this country renders us peculiarly liable, prevented me from obtaining the result of my first experiments with such accuracy, as to enable me to lay them before the society; they were, however, sufficiently satisfactory to myself to induce me to persevere; and, on Friday the 5th day of May, 1809, I directed five bushels of seed rice to be sprouted, which was effected by putting it into a rice-tierce filled with water, which gradually leaked out after the rice had been well soaked; and on the Monday following, the grains being fully swollen and some of it having protruded the germ, it was spread out, some slaked lime sifted over it, to facilitate the distribution, and was immediately sown in a little more than two acres of ground:—this small field had been planted with rice several preceding years, and had then been prepared, by the stubble having been hoed off and burned, and the soil turned and made fine by the hoe: part of it was sown in drills at the distance of about sixteen inches from centre to centre, and the remainder broad-cast: the seed was not covered, but the water very gradually brought over it, covering the land six inches deep on the general level, but being ten inches deep on the lower parts of the field, and scarcely two inches over the highest: directions were given to retain the water constantly, as nearly as could be, at that height, keeping it sweet and cool, by occasionally admitting fresh tide-water, and by turning through it a small drain from the highland. The rice grew through the water, and in about a fortnight the points of the leaves were seen floating on the surface. In those parts where the water had covered the land six or more inches, no weeds or grass appeared, except a few leaves of the wampee and some rushes. In the higher parts especially, near the edges, some water grasses appeared; all these, however, were effectually removed, being picked by hand out of the water, by the application of labour equal to the work of three labourers for one day. This rice, when ripe, was separately harvested and yielded one hundred and fifteen bushels and one peck of clean heavy grain; the drilled appeared better than the broad-cast, but no accurate account of their relative product was kept; and, in fact, the whole experiment is deficient in accuracy, because the land being a small detached piece of very irregular shape, it was difficult to ascertain its precise contents. Its product, however, certainly exceeded the average of the whole plantation that year, and the comparative experiment was so far satisfactory, that this product also considerably exceeded the crops of the two preceding years made from the same land, neither of which crops exceeded ninety bushels. It was also proved, satisfactorily, by this trial that rice would germinate, grow through and tiller, or branch out, well in land constantly covered with from six to ten inches of water.

In the present year I have cultivated, in this mode, twenty-two acres at my upper plantation on Santee river, and forty-eight acres of my lower place. A field of twenty-two acres at the plantation of my mother-in-law, Mrs. Motte, has been subjected to the same process; and my son-in-law, Mr. John Middleton, has cultivated, in the same way a small field containing seven and an half acres, at the plantation whereon he resides. The whole of these are tide-lands, and as the method used in all of them was nearly similar, I will not trespass on the patience of the society, by the details of more than one of them, and will select for that purpose the comparative experiment made at my upper place, because it was made on two fields so similar in quantity, quality of soil, previous treatment, and indeed, in every respect, that a fairer test of the merit of each mode, could scarcely be made in one year.

Each of these fields contain twenty-two acres of our usual plantation measure, (210 feet square to the acre,) they are precisely of the same shape; the soil in both is a light black mould, on a blue clay foundation; the clay, however, lies too low to affect the quality of the upper stratum which is too light, they both have been cultivated upwards of twenty-years successively, in rice, and are only divided from each other by a bank: the drains and ditches in both were clean, the remains of the last year's stubble was burnt off, and the ground prepared, by being once ploughed and harrowed, and assisted by the hoe in low places where the plough could not do good work; the whole was then ploughed with what we call a trenching plough, into drills, being, on an average, nearly eighty in number on each quarter of an acre (105 feet square) and the seed having been put to soak in water the day before, (No. 1 being the field intended for the common culture) was sown at the rate of two bushels an acre, (heaped measure) on the 28th day of March: the seed was not covered but was suffered to lie in the open trench during the night after it was sown, that it might better adhere to the soil, and not be displaced on the introduction of the water, which was slowly brought over it the succeeding morning:—this water continued over the land five days, when finding, on examination, that some of the grains began to sprout, the field was dried and continued so until the rice was old enough to admit of being hoed, when that operation was well executed, and the land still kept dry, until the growth of the rice and the appearance of some grass among it called for a second weeding, which was well executed by hoeing the intervals, and picking by hand, all the grass from the rows of the rice; it then received what is commonly called the long flowing, the water being thrown on the land, to the depth of six or eight inches on the general level, where it was retained sixteen days, only occasionally shifting a little of it to keep it pure. The water was then gradually withdrawn, and as soon as the land was sufficiently dry, a third hoeing was given, stirring the groand well and picking out all the grass and weeds from among the rice: it was then kept dry until it had formed a joint, when the water was again introduced and continued, with occasional freshening, until it was let off to dry the field for harvest; but during this flowing the grass and weeds which had come forward since the third hoeing were pulled out by hand. It was begun to be cut down on the first day of September, and when thrashed and winnowed yielded nine hundred and ninety bushels of rough rice, weighing forty-six pounds per bushel.

I have so minutely described the method used in this field, that the society might be enabled to judge how far this part of the experiment was properly conducted.

The field, No. 2, intended for the water culture, was treated exactly in the same manner with No. 1, until after it was sown, except that the seed prepared for it, was longer soaked and approached nearer to germination; and that one half acre was sown with seed that had not been previously wet. This field was sown on the 2d and the water introduced on the 3d of April, and was kept as nearly as could be flowed to the depth of six inches, on the general level, until the 21st of May; the ground, however, was so uneven, that I measured several plants of rice which had just appeared above the surface, and found that they had grown through 17 inches of water, while some high parts of the field were not covered 3 inches deep. On the 21st of May, the rice now standing up firmly, the whole of the water was turned off and some hands sent in to pull out the weeds, and on the 22d the water was re-admitted and retained until the 30th of June, when it was again completely shifted; immediately after which the field was again flowed, until the 14th of July, when it was once more emptied and renewed the succeeding day; and in addition to these total changes the water was partially freshened as often as circumstances would admit. Immediately after the 14th of July, the rice began to put out the ear, and was ready for the sickle on the 22d day of August, but on account of rainy weather, on that, and the two succeeding days, it was not begun to be cut until the 25th of that month.

Some wampee and rushes appeared early in this field, and the washing of the loose earth from the banks covered the seed in the adjoining rows so deep that the rice did not come through it, and some labour was bestowed in transplanting into those rows.

The quantity of labour expended on this field, between sowing and harvest, was as follows:

May 17th	Eight labourers picking out weeds, etc. half a day each,	4 days work
21st	22 labourers the whole day,	22
	Nine transplanting on margin,	9
24th	One raking off green scum,	1
25th	One ditto ditto	1
June 30th	Twenty-two hands picking rushes, wampee, etc.	22
	Total days work,	59

The product of this field when thrashed and winnowed, was 1069 bushels of rough-rice, weighing 46 pounds per bushel.

This field must have suffered some injury from my having left home about a week after it was sown, without having given sufficient directions concerning the shifting of the water at an early period of its growth. I was absent near three weeks, and on my return found a considerable quantity of green scum among it, which gave it a very unpromising appearance; the rice was then in that state that it would have been thrown down if the water had been altogether withdrawn, it was, therefore, only freshened partially, and the water was not totally changed until the 21st of May; and as I am of opinion that pure water is as essential to keep rice in a flourishing condition, as pure air is to the health of animals, I have no doubt but that this field would have yielded more grain but for this neglect. The half acre, whereof the seed was not soaked, grew equally well through the water, was as early ripe, and to all appearance as good as the rest of the field.

One field of twelve and another of fourteen acres were sown at my lower plantation, on Santee river, on the 25th of April, and treated in the same manner; they were both harvested soon after the storm in September—the twelve acres yielded five hundred and ten bushels, and the fourteen acres six hundred and thirty-two bushels of rice, weighing forty-five pounds to the bushel.—A violent gust of wind passed through the plantation while this rice was growing through the water, being then six or seven inches long, and the agitation of the waves drew up a considerable quantity of the plants by the roots, from the 14 acre field, this left the rice, as we then thought, too thin in that field. The twelve acre field was not so much affected by the storm, and stood very regular and thick, and it proved at harvest that it was too thick, for the ears were much smaller than those of the fourteen acre, and it yielded only at the rate of forty-two and an half bushels per acre, while the other gave at the rate of forty-five.

Another field of twenty-two and a quarter of an acre, very much broken by a large creek, was sown on the 10th of May, and subjected to the same treatment: It yielded one thousand and twelve bushels, or nearly, at the rate of forty-six bushels per acre, of rice weighing forty-seven pound per bushel. The rice in this field also, stood too thick, and one rood which had been sowed *broad cast, injudiciously*, scarcely produced any grain.—One hundred and forty-four days labour was applied between sowing and harvest to these three fields, containing, together, forty-eight acres and a quarter, being precisely three days labour of one hand bestowed on each acre.

The field of twenty-two acres, cultivated at Mrs. Motte's plantation, was so very much polluted with rushes, wampee, and the species of jointed conch grass, called here blanket grass, that the labour bestowed on it was very considerable, and the product bad, nor was this product so accurately separated from the rest of the crop as to enable me to state the amount. I was not present when it was harvested, but on walking over the field, and examining the stubble, I found many patches where the rice appeared to have been totally destroyed by the weeds, but where that was not the case, the rice appeared to have grown perfectly well, the ears of what I was shown as part of the crop was certainly fine, but the deficiencies were so great that I should not estimate the product at more than a barrel and an half, or thirty bushels per acre. One observation was, however, afforded by this trial, which is, that the accumulation of green scum or water moss, was prevented by twice shifting the water completely, during the night before the rice had progressed beyond the point or needle state: and another hint of some importance may be collected from it, namely, not to attempt this mode of culture in fields so foul with water grasses.

The field of about seven acres, cultivated according to this plan, by Mr. John Middleton, was sown on the 18th of April and reaped on the 3d of September, and yielded thirty five bushels per acre, weighing forty-five pound per bushel; the labour bestowed on it was equal to the labour of one hand for eleven days. This field also, was not in good order, and the rice evidently stood much too thick in it, except on the margins, which failed almost entirely, owing, I presume, to the same cause as mentioned in the first experiment. It was remarkable that this field, which was sown on the 18th April, was reaped on the same day with another field, which had been sown on the 28th of March, making a difference of twenty-one days; and this acceleration of maturity attended all the fields thus watered, though not in so great a degree:—I think, however, the trials I have made will authorize me to promise, that rice, cultivated in this mode, will be fit for harvest at least ten days before that treated in the usual manner.

My object, in troubling the society with the above tedious detail, being to induce some of our members to give this method a fair trial; I hope to be excused if I tresspass a little longer on their patience, by explaining the reasons why I consider it worthy of their attention

I think it is evident, in the first place, that to pursue this system, much less intelligence will be required in the cultivators, than the mode usually adopted; and, when we consider the general want of information in the agents commonly employed, this must appear a considerable advantage. Every practical planter knows that to understand the proper periods when the water should be admitted; to what depth the land should be flowed; how long the water should be retained, and how often the irrigation should be repeated, requires experience, judgment and attention. In the method I recommend, the watering process is certainly more simple, nothing being required but to admit the water from the first to a certain height over the land, and to retain it steadily through the whole growth at that height, the only skill and attention necessary to this part of the business being to keep the water pure and sweet, by changing it partially, or altogether, as often as is necessary for that purpose, and as circumstances will permit.

Of the advantages this method possesses over the common mode as it respects the saving of labour, the comparative statement, exhibited above, furnishes abundant proof; and when the disadvantages arising from want of experience are considered, little doubt can, I think, be entertained, but that a few years practice, would enable us to diminish even the small portion of labour applied in these trials, and the application of the labour, so saved, to other useful purposes would certainly be peculiarly beneficial to the land holders of the lower country, where many persons possessing more land than they can cultivate, it must be of the utmost importance to them to have more than three-fourths of their labourers relieved from their present occupations for one-third of the year, and ready to be employed in bringing into cultivation valuable land now lying useless, or of more highly improving that now in use. Many planters also, who have not now the leisure to prepare materials for building and to erect dams sufficient to enable them to use water-mills, and other machinery for manufacturing their crops would no longer be prevented from enjoying that benefit. Such also, as have good highland near their swamps, would be enabled to plant cotton or other valuable products in addition to their rice crops; and they whose highlands are of inferior quality, might improve them by manures, which, in our lower country, are every where at hand; for the worst of what is called pine barren, abounds in weeds and plants which grow luxuriantly in summer; and every part of vegetable as well as animal subsubstances, may be converted into good manure. It is not therefore, the scarcity of that article, but the want of labour necessary to collect, prepare, and transport it, that occasions this great improvement to be so little used among us.—Lime, which is known to act so beneficially as a manure on the texture of sandy soils, might, during this season of leisure, be burnt from the shells, with which our sea-coast abounds, within the reach of most of our rice-planters, and either applied to the melioration of the soil, or sold to considerable profit at market; and, where timber abounds, sawing for market would prove a beneficial resource. But in no respect would this system, if successfully pursued, afford such permanent advantage and satisfaction as in the improved health of the persons actively employed in the cultivation; for it must be evident that the exhalation from the water frequently shifted and kept in a state as pure as is here recommended, would be far less deleterious, than that arising from the mud of the swamps after the water is withdrawn. Any person who has passed near a rice-field within a few days after the water has been let off from it must be convinced of the truth of this observation. But a further improvement in the health of our labourers may reasonably be expected to result from the experience which, of late years, has amply proved, that our pine-barrens, removed but a small distance from the swamps, and especially where a barrier or screen of trees is kept between them, afford residences infinitely more healthful than the immediate vicinity of rice-fields. If then, we shall find our labourers no longer bound to reside near the rice-fields by the attention and work necessary to be performed in them, according to the present plan, is it unreasonable to hope, that we shall, by degrees, and as circumstances may admit, remove our settlements to convenient distances in the higher lands, where our people might be employed to advantage, and enjoy better health? A few persons, in this case, must necessarily be left to attend to the watering process; and when the rice approaches to maturity the water should be withdrawn a few days earlier than is now customary, which would not injure the crop, but would suffer the first and greatest exhalations to pass off before the attendance of the labourers would be necessary in the field.

Before I conclude I will mention one more advantage that may possibly attend this mode, without entering into any detail concerning it, which is, that this mode of culture seems calculated to admit with advantage the practice of transplanting rice, whereby we may be enabled to obtain two crops in one year, from a considerable portion of our land;—this, I find, is a practice generally pursued in Egypt, in China, in Industan, in the Phillipine Islands, and in Spain; and I hope next year, to have it in my power to offer to the society the result of an experiment I have begun, with the hope of ascertaining whether this practice may be beneficially adopted in the culture of our rice lands.

It may have the appearance of presumption in a person having so little experience in this mode of culture, and who, it is evident, from the above detail, committed several errours in his former trials, to offer instructions on the subject; but, hoping that such of my friends as may be induced to try this mode, may profit by my mistakes, I will venture to recommend to them to keep their land dry all the winter, and to plough and harrow, or turn and break the soil, with the hoe, as well and as often as circumstances will admit, and for this purpose the land should be enclosed with good banks and well drained; by this the growth of the roots and seeds of aquatick plants, which alone are to be feared in this culture, will be much checked if not destroyed. Until further experiments shall have ascertained it to be unnecessary, I would advise that the seed should be steeped in water for, at least, twenty-four hours before sowing, and then sown as usual in drills, (that in case the experiment should so far fail as to render hoeing necessary, that operation might be performed) as in this mode of sowing nearly every grain sown germinates. I believe from one and an half to one and three quarters of a bushel of seed to the acre, will be found sufficient, giving the largest quantity to those parts of the field which are lowest. The seed should by no means be covered by earth, but the water admitted slowly in the morning of the day after sowing, and increased gradually to as great depth as the supply of water and situation of the banks will admit, whereby all the loose stubble and trash in the field will float and be driven by the prevailing wind to one side or corner of it; this trash should be removed, and, immediately after the water reduced to six inches over the general level of the field. In the afternoon of the fifth day after sowing, water should be entirely withdrawn from the field, and readmitted with the next tide, or early in the morning of the next day. In five or six days more this complete change of water should be repeated, taking care to effect it while the rice is still in the needle state, and consequently not liable to be thrown down. After this the water must be kept on steadily until the rice shall have grown through it and stands firmly; observing only to freshen it occasionally, by drawing off one or two inches and raising it again with the next tide to its standard. As soon as the rice stands up strongly, the water should be again entirely changed, and that process repeated two or three times (or oftner if it be necessary to keep the water quite pure and fresh) before it is finally taken off to dry the field for harvest.

I remain, with the utmost respect,
Dear Sir,
Your faithful and obedient servant,
THOMAS PINCKNEY.

John Champneys, Esq.
President of the Agricultural
Society of South Carolina.

ON THE MANAGEMENT OF HORSES AND DOGS—BY AN EXPERIENCED SPORTSMAN.

(Continued from page 27, vol. 5.)

I shall now speak concerning inflammatory fevers. They are not difficult to cure. First, the horse's pulse should be felt to ascertain the height of the fever; a horse's pulse is to be felt by applying the palm of your hand, pressing hard, just behind the elbow of the left fore-leg. A horse's pulse, in good health, should beat about forty or forty-two pulsations in one minute. I have known a horse's pulse to beat above 80; but then the fever was very violent, and the horse must be plentifully bled; and he must be bled again the second day, provided the fever is not abated.—To this one horse I now speak of, I gave *four ounces of nitre every day*—but, in general, three ounces is sufficient, unless the fever be very high. As the horse will not eat corn, in which the nitre may be given, you must make the nitre into a ball, and give it him; and be sure to drench him plentifully with water grue.

When a horse is much reduced by illness, but has recovered his appetite, the best thing to nourish him, I know, is malt. Put the malt into a stable bucket, and just cover it over with boiling water; throw a cloth over the pail, and let it steam for about half an hour. A person I knew well, who used to prepare the physic for his horses himself, put a certain quantity of calomel to a certain quantity of aloes and other ingredients, into an earthen pot, and boiled them together. From not stirring the ingredients constantly, until they were quite cold and stiff, the calomel all settled at the bottom of the pot. The first year he physicked his race-horses, they did well; but the second year, coming to the bottom of the pot for the physic, he killed two or three of his young racing colts, and materially injured some of the aged horses.

To obviate this danger, when it be judged necessary to give a horse *calomel*, let *two drachms* be given over-night, and the aloetic purge the next morning. To a young colt, of two or three years old, you must not give above half the quantity of calomel.

For the gripes, or cholic in horses, the very best thing you can give them, is a WHOLE BOTTLE OF DAFFY'S ELIXIR, MIXED IN ABOUT HALF A PINT OF WARM ALE, AND A LITTLE GRATED GINGER.

When I kept a stable of horses, I never was without three or four bottles in the stable. It is an expensive medicine, I acknowledge; but what of that?—purging must be promoted, not checked. We all know that Daffy's elixir is made of a decoction of senna and warm spices. The senna purges gently, and the warm spices comfort and warm the horse's stomach. You will find a horse sometimes shew that he is in considerable pain, endeavoring frequently to stale, and cannot. This is frequently taken for the gripes; but it is not the gripes: it proceeds from costiveness in the horse, and the dung-bag being so full as to press hard upon the bladder, which prevents the horse from staling. Let a boy, with a small hand, well oiled, rake him: the horse will stale directly.

To ease pain in a horse's foot, or to make a dry, hard, brittle, or contracted foot supple and expand, I know nothing equal to boiled linseed, applied warm to the foot.

When the foot be wounded by picking up a nail, cut by glass, or by some other accident, in which case gravel may have got into the foot, it will be necessary to apply a common poultice with Venice turpentine, to draw the gravel out.

Never, on any account, grease a horse's hoof, which all-wise John Grooms do, as they say, to supple it and keep it from cracking; grease has a contrary effect. Take your horses out from the clean straw and dab their hoofs well, morning and evening, with stale chamber ley.

Take a dry hoof of a horse, cut it in half, steep one half for several days in a pot of chamber ley, and the other in a pot of grease; take them out, wash them both clean, and lay them aside. In a short time you will find the one steeped in chamber ley tough, genial and pliant; the other, steeped in grease, will be hard and brittle; this has been tried. You may anoint the coronet of the foot with a little fresh grease, but no other part of the foot.

Provided a splint lies on the bone of the leg, so as not to impede the action of the sinew, I recommend by all means to let it alone, and do nothing to it; but if it lies near the sinew, it must be taken away. The best method I am acquainted with, is to rub it with a round stick, till it feels somewhat soft, then prick it in many places with a bodkin or packing-needle, moderately hot; be sure to make two or three holes quite at the bottom. A gentle blister will then reduce it.

With spavins and ring-bones I will have nothing to do. Send for a skilful veterinary surgeon. It requires skill and practice to operate on the vein in blood spavins, and I believe bone-spavins generally incurable; at least the horse will not have the free use again of his joint; and ring-bones are very bad maladies.

Corns should be clean cut out, and a wide *wash* extended from the shoe, in the form of three-fourths of a circle, and about two inches broad, over the part where the corn was, to guard it from sharp stones, gravel, &c. I do not approve of a bar shoe, it confines the dirt in the foot too much.

It is dangerous to attempt to dry up running thrushes, unless the horse be put under a course of strong physic; for, if, by sharp washes alone, you attempt to dry them up, the disorder frequently flies to the eyes, when, for a time, you nearly blind the horse. I look on running thrushes a discharge of nature, much the same a sweaty feet in man: dry them up, and I imagine the disease will fly to some other part of his body. I am certain it always will in a horse: The only safe method of treating them is, to WASH THEM CONSTANTLY WITH STALE CHAMBER LEY. I would also particularly recommend giving A FEW OF THE NITRE AND SULPHUR BALLS, provided the thrushes run abundantly, and smell very fœtid.

A horse cannot easily be lamed in the shoulder, except from a fall, a blow, or from running against some hard substance. But wise John Groom, and the farrier, provided they know not where the lameness really lies, swear the horse is lame in the shoulder; whereas the lameness is in their heads, and not in the horse's shoulder.

I will give yuu an infallible method to know whether a horse be lame or not in the shoulder. When you trot the horse, if he be lame in the shoulder, the muscles are affected, so as to prevent his extending that leg, or stepping out so far with it, as he will with the other leg; he will step considerably shorter with that leg. When the lameness lies below, he will extend the lame leg as far as the other; but, when he puts the foot to the ground, will show lameness. If the cause of lameness be not very visible to the eye, you may rest assured it lies in the foot or fetlock joint: in this case send for a veterinary surgeon; for, to cure it, great skill and practice is necessary, and a thorough knowledge of the anatomy of the foot and fetlock joint. I have known several horses totally spoiled by lameness in the feet, and never fit for any other use but to draw a cart or wagon, where they never are forced beyond a walk.

The best method of treating gun-shot wounds in horses, is, to inject spirit of wine; if that cannot be procured, use brandy, which will do extremely well; if that be not at hand, use rum.—It is wonderful how speedily horses recover from gun-shot wounds, provided tney are not shot in the bowels or other dangerous parts of the body. Yet I once had a horse shot directly through the centre of the body, about five inches above the bottom of his belly, and he was very well in a short time: and another horse of mine (it was singular,) had a ball absolutely flattened on the bone of the hind leg, just above the fetlock, which I cut out in the afternoon with a common penknife; the side of the ball next the bone was quite flat, and as broad as a shilling: it lamed him for some time. I saw a horse belonging to a captain in our regiment, in a very few months shot once through the neck, and the second time through both buttocks. In about five weeks after each wound, his master rode him; so very quick does the flesh of horses heal.

Ointments should seldom be used to any lacerated part, *and never to gun-shot wounds;* but when absolutely necessary. The following is the best, as there is very little grease in it.

TAKE OF LINIMENTUM ARCÆI (ARCÆUS LINIMENT,) ONE OUNCE; OIL OF TURPENTINE, TWO DRACHMS; VERDIGRIS, A SUFFICIENT QUANTITY TO TURN IT TO A DARKISH GREEN COLOUR. This is an excellent healing ointment; BUT SIMPLE OIL OF TURPENTINE WILL DO WONDERS.

I have not made any observations relative to the shoeing of horses for several years at New-market: formerly they were scandalously ill shod. It is to be hoped that since skilful veterinary surgeons have resided there, the method of shoeing has been altered. I have seen many horses' feet so narrowed at the heels by bad shoeing, that the points of the fore shoes have nearly touched at the heel. I am certain this has been the cause of laming numbers, and would have lamed many more, were it not from the fine soft turf they are exercised on.

I have frequently bought strong boney horses, with feet infinitely contracted. In four or five times shoeing, I have widened their feet above one inch, and, in time, brought them to have a good foot, broad and open at the heel. To accomplish this, the shoe must be made quite straight, from the centre to the heel, not in the smallest degree turned in at the points; pare the contracted points away, and let the point of the heels rest on the shoe. The heel, thus rested on the shoe, will naturally expand. Some people may say this method of shoeing may make the horse cut; I deny it; the horse never cuts with the heels of his shoes; nay, even in the speedy cut, he strikes his leg with the centre of the shoe.

When a running horse is badly let down, as it is termed, in the back sinews, the best way is to turn him to the stud; for I am certain he will never stand a severe race; and whatever you do to him, if you hunt him, he is ever liable to break down *in deep ground.* However, in case you are determined to try him, the leg must be reduced first as much as it is possible, and then he must be blistered and fired; but, above all, he must have long rest given him, *and the whole winter's run, in a very dry padock*, wherein there is no marshy nor wet ground.—The winter's frost and cold air, will, I believe, perform the greater part of the cure, together with long rest.

I own the following is a fancy of my own, and that I never have tried it; but, in my poor opinion, I think it stands to reason. On the former lame leg, the shoe should be made *full half an inch thicker at the heel* than the shoe on the other foot, to give the injured sinew some additional relief. Indeed, I once had a capital cantering hackney fired in both fore-legs. I always shod him at the heel of both feet, much thicker than any other horse; but then I never cantered him at above the rate of ten miles in the hour. He went so completely on his haunches, that but little strain laid on his fore-legs. This is the great perfection in all horses' actions. All of them go *from* their hinder parts, but very few go completely *on their hinder parts*—no hunter can go through deep ground, unless he does; and no horse, which goes differently, can be used on the road with safety to your neck

(To be continued.)

* * *

Doyles Town, 19*th Nov.* 1822.

A writer says, "tobacco exhausts those juices so essentially necessary to further digestion; it creates thirst and nausea; it destroys appetite; the complexion becomes cadaverous; finally, the chewer and smoker becomes a poor, miserable, *attenuated*, atrophic, walking skeleton, smoking away his few remaining ideas, and spitting up his lungs, until death releases him from all his sufferings." The truth, we believe, is, that to many constitutions tobacco is hurtful—to others innocent; and the true course is for those who find it injurious, to abstain from its use.—That it is pernicious to young people generally, is past doubt, and therefore its use by them ought to be forbidden or discouraged.

THE CHRISTIAN ÆRA.

The most ancient author whom we find using the modern mode of date, *Anno Domini*, is the venerable Bede, who published his Ecclesiastical History in 731. It was adopted in France under King Pepin, and fully established in the reign of Charlemagne. The custom of beginning the year on 1st of January, commenced in France in 1564.

RUTA BAGA.

HAVE MORE NUMEROUS AND PARTICULAR EXPERIMENTS PROVED IT TO BE A PROFITABLE CROP? DOUBTED, AND REASONS GIVEN.

Mr. Skinner—

It is important to the agricultural interest of our country, that the merit of any new product or mode of cultivation, should be tested by careful and accurately recorded experiments, in order that its fitness to our climate and the habits of our people, should be well understood.

Several years have elapsed since the public attention was called to the subject of ruta baga, by the publication of Cobbett's books, and the experiments of many of our intelligent and enterprising cultivators. Time has been allowed for testing the value of this root as a food for stock. I have seen no recent communications in your paper on the subject, and judging from my own experience, and my observation of the agriculture of my own neighborhood, I am apprehensive that it has not proved so profitable a product, as was anticipated by our zealous and enterprizing agriculturists. It is very certain that the great product stated by Mr. Cobbett and other English writers, to be so common in their country, very far exceeds any well authenticated account of the product of any experiment in this country. I have received an account, which I have no doubt is correct, of a crop of 335 bushels on half an acre, raised by Mr. Samuel Sayre, of Sussex county, in this state, for which he received the premium offered by the agricultural society of New Brunswick. This, however, is a solitary instance, as far as I have been informed, of a great crop in this state, and falls very far behind the ordinary crops of England, according to Mr. Cobbett.—The result of many careful experiments, made by farmers in my own neighborhood, is by no means so favorable. I have pursued the object diligently, and anxiously, for four years, and in no instance, with the most careful management, have I obtained more than 250 bushels from an acre.—Whether the failure is to be ascribed to our climate, or to the dry seasons which have prevailed since the commencement of my course of experiments, I am unable to decide. That in some, at least two of my experiments, I have used good seed, I am perfectly satisfied; and that, in no instance, have I omitted the closest attention to time and good cultivation, I can venture to assert. A summary of my management will probably satisfy you on these points.

In 1819, I prepared an acre of fine sandy loam, by twice ploughing; 32 cart loads of well rotted compost were placed in the furrows, and covered in 4 feet ridges. The seed was drilled on the 26th June. Such was the severity of the drought that all the seed perished, except on the sites of two compost heaps, where they came to perfection. These few roots made about sixteen bushels, and were large, fair, well coloured and finely flavoured. An attempt to replant was rendered abortive by the continuance of the drought, too long to admit of the plants attaining any size. In 1820, I drilled 3 acres of a sandy loam, capable of producing 35 bushels of corn per acre—about 22 loads of well burnt ashes, from rushes and hassocks, were spread broad cast on each acre—the ground thrown into 4 feet ridges,—the time 26th June.—Nothing could exceed the beauty of the crop while growing—the leaves frequently met in the 4 feet spaces. The best acre was measured, and produced only 250 bushels—their quality was excellent, their appearance perfectly fair. In 1821, two acres of stronger ground were prepared by two ploughings, after a crop of corn 35 bushels per acre—about 25 cart loads of well rotted barn yard manure were applied—the seed drilled 26th June. The crop was kept in high cultivation—it was much admired by those who passed it. Five hundred bushels per acre was the expected crop—when pretty well advanced, the tops assumed the appearance of cabbages, with necks three and four inches long—when gathered, the roots were hard, fibrous and tough, of a pale yellow colour, and unfit for the table, although greedily eaten by my hogs—the produce did not exceed 160 bushels per acre. The quality of the ground may be fairly estimated, by the crop of oats which followed the ruta baga, being 51 bushels per acre.

In 1822, I was induced, by the success of Mr. Sayre beforementioned, to plant earlier than recommended by Cobbett. His best roots were sowed in his garden on the 22d and 23d of May, and transplanted on the 20th of July. I drilled this crop about the 1st June, on a very fine piece of sandy loam, manured with about 40 cart loads of stable dung per acre. The crop was beautifully regular and vigorous in the early part of the season. I was confident of obtaining 500 bushels per acre. In the latter part of their growth the drought became extremely severe, and was afterwards so destructive, that the lower leaves perished, and the growth of the roots was completely checked. I did not gather more than 150 bushels per acre of hard, fibrous, bad coloured, and almost tasteless roots. They were not eatable in my family, but were relished by my hogs, who have lived on them through the winter, up to this time. They had the same cabbage-like appearance as the preceding crop. This same appearance was exhibited by a row raised from the seed sent by Mr. Christopher Hughes, Jr. from Sweden, and which you kindly sent me a sample of—and was equally visible in two rows from English seed, sent to me by Dr. Mease, of Philadelphia. I observed the same defect in the plants from seed sowed broad cast on the 26th of June. My seed this year was bought of Mr. McMahon, and warranted as true yellow ruta baga.

I believe, from the best information I have been able to obtain, that the ruta baga, when sowed before the end of June, loses much of its excellence as food both for man and beast. I have raised them for my table for twenty years, broad cast, sown in July, of a good size and quality I suspect much of the seed used at this time is spoiled by mixture with the cabbage—this I have known by personal observation.

As the produce of the ruta baga is so much less here than in England, I have long suspected the climate of America to be less adapted to it than that of England. It is well known that the potatoe, with the best management, yields much less in this country than in England, and very much less than in the Eastern states and in the British provinces. It is possible that the same effect may be produced in the two roots from one and the same cause.

I have, for many years, found the benefit of raising green vegetable food for my stock. Potatoes and pumpkins I have raised in large quantities for this purpose—but having found my hogs particularly fond of the ruta baga, on which they will thrive through the winter without grain, and even without water, I have felt extremely desirous of convincing my mind that they were a profitable crop. On this point, from my own experience, and from my observation of the practice of others, I am compelled to doubt. I wish the subject to be examined by sensible and practical men—with this view, I ask of you an insertion in your very useful paper, of the loose thoughts I have thrown together. I shall rejoice if better informed men shall convince me that I am in an error, on a subject that is interesting to every cultivator of the soil. My present impression is, that I should have raised fifty bushels of corn on every acre which I have applied to the cultivation of the ruta baga, which would have afforded a far greater quantity of nourishing food, and in a more convenient and economical shape for winter use.

A NEW-JERSEY SUBSCRIBER.

April 2, 1823.

Editorial Correspondence.

PEA CULTURE.

Extract of a letter dated Scotland Neck, N. C.
3d April, 1823.

"I saw in the farmer a few week's past, that a gentleman was about to send you from this state, some *Georgia* or *Tory peas*—should you receive them by the 20th April—if your land is kind for peas, I want you to plant a few in ground that was tended last year, and not cultivate them at all—I have for the last two years planted a considerable quantity in the following manner.—About the last of April or first of May, I lay off rows by the side of the old corn hill; the pea droppers follow and drop from 8 to 10 against the hill, and cover them with their feet. I do nothing more to them, and have had as luxuriant a growth as I ever have seen grown in fields cultivated in the fall. I turn my hogs in on them, in their green state, which fattens them very fast, and will not injure them. On land that really suits, I think them far preferable to clover for us, as we have the vine, leaf and hulls—and nearly or quite as many weeds, as if nothing were planted in the ground."

RUTA BAGA.

Worcester, (Mass.) April 1st, 1823.

"In reference to the ruta baga, I regret to say, that I am almost alone in this part of the country, in its cultivation. The well established fact, that it communicates an unpleasant flavour to milk, when fed to cows, has brought it into general disesteem. Still I regard it as the most valuable root for husbandry culture. It has been particularly useful to me, in the keeping of swine; and added to my own observation, I have the authority of my farmer for the assurance, that it is equal to one half of their keeping in summer, with the most inconsiderable expense only of labour. My course is to sow the seed thick, and as soon as the plants are of the usual size to set, to begin thinning them out, and giving the green plants, which are pulled, to the swine. The field may thus be gone over several times during the season, leaving the plants at last as thick as they will well ripen by harvest time. The swine being thus fed at first, became fond of the ROOTS, and will continue to eat them greedily through the winter. Within a few days I have witnessed a large basket of them from the cellar thrown into the pen, and apparently as readily devoured, as would have been so much corn. The hogs are in good condition, and these turnips have been their principal food. My sheep also are much improved by them, especially about the time of yeaning. These facts are the rather stated, as proof that the seed which you kindly sent, will be appreciated by at least *one individual*, and with the thanks of the society for your attention, I pray you to accept mine for the *value* of the present.

With much respect,
I am your obedient servant,
LEVI LINCOLN,
Cor. Sec'ry W. Ag. Society."

AN EXTRAORDINARY CHARACTER.

We learn from our Penzance correspondent, that on Thursday, the 9th Jan. died suddenly at Frasza, in the parish of Ludgyan, Mr. James Hosken, a farmer, possessed of some property, and said to be a very honest man, but of singular opinions and eccentric conduct. Some years since he parted from his wife, in a fit of jealously, occasioned by her allowing a relative who was taking leave on going abroad to salute her. The quarrel was never made up, and he afterwards lived with another woman. He evinced little respect for the forms of religion, and in consequence of dispute with the clergyman of the parish, respecting a charge for the erection of a tombstone at the grave of his two daughters, declared that he never would be interred in the church-yard. In consequence of this determination, he fixed on a spot in his own land as the resting place of his mortal remains, on a hill near the ruins of an ancient tower called Castle Dennis, said to be built by the Druids, from which there is a view of both channels. Here a few years since he enclosed a small space with a wall, and at each end fixed a tablet. On the one is engraved "Custom is the Idol of Fools;" on the other, "Virtue only consecrates the Ground." In this spot his remains were deposited on Monday last, agreeably to the directions in his will.—A concourse of between 5 and 6,000 persons attended, to whom the Rev. G. O. Smith, of Penzance, delivered a suitable discourse on the occasion.—*Cornwall Gazette.*

THE FARMER.

BALTIMORE, FRIDAY, APRIL 25, 1823.

CATTLE SHOWS.

Every week lately has brought us hand-bills setting forth the premiums to be distributed the ensuing autumn by the Eastern agricultural societies. From these there appears to be no abatement of their zeal, and great improvement in the application of it. In this paper ye have copied the list of premiums offered by the Essex Agricultural Society, signed and probably prepared by the venerable PICKERING—*because* it "departs materialy from what seems to have been the leading principle in all the agricultural societies of the country—that of offering premiums chiefly for certain specific articles of husbandry, instead of the combined improvements of entire farms."—It will be conceded that we ought not to publish all these lists—for, like constitutions, they are very much alike, and contain generally little that is new and important; not so, however, with the one in question—and we have therefore inserted it for the consideration of the Maryland, and other Agricultural Societies.—Moreover, the reasons given for drawing attention, and for offering their highest rewards, to new objects, serve at the same time to convey practical information which must prove acceptable to most farmers. There is, however, one thing in this scheme of premiums we regret—and that is, that they are offered in—*money* instead of pieces of plate, in some specific form for domestic ornament or use. There seems to us to be all imaginable difference in the sentiment which must accompany the two forms of reward—with the idea of mere *money*, "filthy lucre," it is difficult to associate that of generous and patriotic pure spirited rivalry, which conquers without force or aggression, and defeats without inflicting a wound. Money, is the common boon of vulgar competion in the lowest grades of human exertion and strife.—The common stimulus proclaimed for the apprehension of the runaway slave and the house breaker is "twenty dollars reward"—whereas, when the premium is given in the shape of a can or a goblet, a spoon or a thimble, it may be placed on the sideboard or the mantle, and becomes an object for exhibition and harmless boasting to our friends—and goes down, from one generation to another, as a sort of heir-loom in the family—a mark of affection in family bequests—some simple inscription serving to chronicle the merits or the enterprize for which it was originally bestowed.—For ourselves, we confess that we never feel more self-satisfaction than when we are displaying to our agricultural friends, the little silver waiters, standing on cow's feet—"Presented to J. S. S. by the Maryland Agricultural Society, for importing Shepherdess and White Rose: June, 1823"—and the silver pitcher, with a well engraved likeness of Champion on its front—ten times the cost of them in money would be valueless in comparison. For every premium, however small, some appropriate symbol may be devised, combining permanence with utility—and we take occasion to repeat the offer of our services to have them prepared by *Mr. Warner*, who has heretofore supplied, on the most reasonable terms, appropriate pieces of plate, by order of several societies to whom his work has given entire satisfaction.—All we desire is to experience the pleasure of aiding in giving the best direction to the bounty of those who wisely patronize agricultural emulation. ☞It should be remembered that all Orders for premiums in this shape should be given several months before hand, to give time for their preparation.

BAKEWELL, OR DISHLEY SHEEP.

A number of very superior sheep were slaughtered and sold in this market, early in this month, by Mr. Curtain and Mr. Elliott.

The lot, consisting of forty, yielded 3834 pounds of mutton, and 588 pounds of rough fat. These sheep sold, we understand, for 13 dollars each, for mutton to the victualler, and some of them cut full four inches of clear fat across the ribs. What was remarkable in this case, was the fact that they were generally only year olds past, or two years this spring. Every one acquainted with the difference of sheep, however, knows that the Dishley are chiefly remarkable for the fineness of their bone, and their great disposition to fatten at a very early age. This lot of sheep, were from the same gentleman, and are of the same breed, as those exhibited at the Maryland cattle show in June last, of which the society made such favorable mention, and which were afterwards sold to a gentleman at Wheeling.

☞ LARGE HOG.—Along with the sheep, Mr. Barney brought a hog, two years old last fall, of General Ridgely's Parkinson stock, which weighed:—

Nett weight of carcase, - 751
Leaf fat, - - - - - - - 88

Mr. Barney took the precaution to *measure* the bullocks on the hoof, an account of which we published in No. 2, vol. 5—to prove the accuracy of the mode given by Mr. Wright, in No. 24. volume 4—for ascertaining the *nett weight* by the *measurement* of *living* animals. The result was, that the ox of General Ridgely's Dutch breed, measured to weigh 1415 pounds, and actually weighed 1405. It is probable that a little experience would enable graziers to come by measurement, near enough to the real weight for all practical purposes.

New-York, April 22.

FROM CADIZ.

We learn from Captain Packard, of the brig Walter, arrived yesterday from Cadiz, that the king and royal family were hourly expected at Seville; and when coming out he heard a firing in that direction, which was supposed to be the signal of their arrival. Accounts of hostilities having commenced were daily expected.

Captain Packard is the bearer of dispatches from Mr. Forsyth, our Ambassador at the court of Spain.

It was reported at Cadiz on the 16th, that 15,000 French troops had entered Spain, which increased the probability of war. A Spanish 74, which had been driven from Madeira with loss of anchors and cables, had arrived at Cadiz.

It was reported at Madrid on the 4th, that the 23d French regiment, which had been sent to construct a bridge at Bidache, had deserted with all the plans in their possession, and had declared themselves in favour of a free constitution.

Philadelphia, April 23.

THREE DAYS LATER.

The new packet ship Montezuma, capt. Potts, arrived here yesterday from Liverpool, brings Liverpool dates three days later than those heretofore received. The Paris dates are not so late as those received at New York.

The intelligence from Bayonne, which is to the 2d of March, is decidedly warlike. The army collecting in the Lower Pyrenees is estimated at 35,000—the artillery at 160 light, and 24 heavy guns—the number of wagons is 500.—The army of the Faith, in Navarre, the three provinces and Arragon, amounted to 15,000 men, to which must be added an equal number enrolled in the provinces, who wait only for arms and ammunition. O'Donnel is to command in Navarre, 12,000 muskets, 12 pieces of artillery, and a pretty large sum of money have been placed at the disposal of O'Donnel and Quesada.

The Paris correspondents of the London papers mention, that the French journals give no idea of the state of public feeling on the important question of the expulsion of Manuel, and that the alarm in the upper circles of *Ultraism* was excessive.

It is affirmed under the Brussels head of March 5th, that the English officers on half pay, who are on the continent, have received orders to return to England, where they will be employed in actual service.

Private letters of the 14th state, that the King and Cortes had left Madrid for Seville, which is confirmed by accounts from the latter place.—The first detachment was to have left Madrid on the 10th, and it was supposed that the King would attach himself to the centre party.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 50—Howard st. Superfine, $7 25—fine do. $6 75—Wharf, do. $7 to 7 12½—Wheat white, $1 55 to 1 60—Red do., $1 50 to $1 55—Rye. 80 cents—Corn, 60 to 63 cents—country Oats, 50 to 55 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3 50—Herds' Grass do. $3—Timothy do. $4 50—Millet, $3—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb—Eggs, 18¾ cts. per doz.—Hay, $18 per ton—Straw, $11 to 12.

MARYLAND TOBACCO.—Grown by C. S. Ridgely, Anne Arundel county $25 a 30—by George Edelin, Anne Arundle county 23—by John Ridgely, Baltimore county 26 50—by George Thomas, St. Mary's county 13 50—by Dr. James Thomas, St. Mary's county 17 a 19.

AGRICULTURE.

From the Archives of Useful Knowledge.

AN ESSAY ON SOAP-ASHES, AS A MANURE.

It has been found, that the produce of soap-ashes in London, and its immediate neighbourhood alone, amounts to above 20,000 tons annually and is likely to increase, more especially from the use of *kelp* having been latey introduced into the London markets. The Board of Agriculture having been convinced, from the most accurate information, and from experience, that this quantity of valuable manure if brought into more general use, would be an object of very considerable importance to the national agriculture, ordered an abstract of their report, on this subject, to be printed and circulated; being desirous of giving all the publicity possible, to a circumstance so well deserving the attention of *farmers, gardeners, hop-planters, nursery-men*, and others employed in the cultivation of the soil, more especially those in the vicinity of the metropolis, and on the borders of navigations therewith connected.

This abstract of the report of the board of agriculture, published about four years since, having been widely circulated, and much considered, has deservedly attracted the notice of agriculturists in general, and has induced them to make a variety of experiments with soap-ashes, on different soils, and for different crops. Many highly interesting communications, on this subject, having been made to us, we conceive it to be a *public duty* to render them more permanently useful, by publishing in a condensed, but popular form, the important facts which they contain.

This is the object of the present essay. We shall consider the subject under the following heads:—

1. *The nature of soap-ashes.*
2. *Analysis.*
3. *The soils on which soap-ashes may be used with advantage.*
4. *The quantity per acre.*
5. *The crops for which soap-ashes are used, and the manner of applying them.*
6. *The price.*
7. *The effect of soap-ashes on grass and arable lands, in parks, gardens, &c.*

SECT. I.—NATURE OF SOAP-ASHES.

Soap-ashes differ very materially in quality, according to the sort of alkaline salt which is used by the soap-boiler. When *kelp* and *barilla* are the materials, the ashes are found to possess twice the strength and effect of the refuse of common potash. Much kelp being *now* used by the *soap-manufacturers in London*, their ashes are greatly improved as a manure; as they contain a larger quantity of neutral salt, sulphur, and carbon, than when barilla only was employed. To this circumstance, we must attribute not only the different quantities per acre that are recommended, but also the different results which have attended the use of this dressing, in various parts of the kingdom.

Soap-ashes afford a much *cleaner* manure than *dung*. A dung-hill, after laying for some time, is covered with weeds; and, in using dung, the farmer generally introduces almost every sort of weed into the ground. A heap of soap-ashes is never covered with weeds, but with a *fine sweet grass.*

Some ill-founded prejudices having been formed against the use of soap-ashes, on account of their *supposed* burning quality, a statement of the following fact, will, we think, completely eradicate them. When a piece of ground has been covered, for a length of time, with soap-ashes and dung, the verdure is naturally destroyed. Those parts of the ground on which *soap-ashes have been laid*, recovered their verdure *first*, and bring up sweet grass and white clover.

In *East Lothian*, in North Britain, the farmers are very careful in collecting all the kelp weed which is cast ashore during the winter, and which they lay in heaps, upon their lands. *This is using soap-ashes in another way.* In the neighbourhood of Dunbar, where the farmers use soap-ashes, as well as the kelp weed, they pay as high a rent as *seven pounds* per English acre, for very considerable tracts of land; which are principally cultivated with wheat.

SECT. II.—ANALYSIS.

Soap-ashes contain lime partly saturated by carbonic acid from the barilla or kelp; a portion of alkali; neutral salt; sulphur; carbon; silex, and calx; each, separately, of the utmost importance to land. According to the more minute analysis of Dr. Davy, the ashes from barilla contain 91 parts in 100 of carbonate of lime, and quick-lime; and carbonate of soda. The ashes from *kelp* contain calcareous matter, in the same state as that from barilla; gypsum; and soluble saline matter, containing, apparently, nearly the same proportions of carbonate of soda, and of common salt, as in the former instance.

It is obvious then, from the chemical nature of soap-ashes, that they will be applicable wherever calcareous matter is wanted in lands, and that they will serve the purposes of *liming.*—Soap-ashes are, indeed, much superior to quick-lime as a manure.

A very respectable farmer in Holderness, Yorkshire, has affirmed, that he found *ground chalk* very superior to quick lime; this however, from the expense of grinding it, he was obliged to relinquish. The soap-ashes and the chalk holding carbonic acid, and the lime being deprived of it, afford a convincing proof of the superiority of soap-ashes as a manure. The alkaline salt and gypsum that they contain, will render them much better than common calcareous matter, as a top-dressing to every kind of grass.

SECT. III.—THE SOILS ON WHICH SOAP-ASHES MAY BE USED WITH ADVANTAGE.

Upon all *strong and cold soils*, soap-ashes will prove of infinite service, whether applied to the wheat crop or to cold wet pastures, particularly in Surrey. Upon the lighter loams, it is an excellent manure mixed, and in a moist season, its effects are quickly visible and permanent.* Of all the manures tried on *peatmoss*, soap-ashes answered the best.†

Soap-ashes used in *cold, wet, spongy*, meadow-land, have apparently dried it, and the salts they contain, made it produce much greater crops of grass than before.‡

They are found very good and durable, in Lancashire, on *dry pastures.*§

On a *clayey loam*, somewhat brashy, and particularly on *cold wet pastures*, soap-ashes have been used with great success.‖

Poor clay land. Soap-ashes laid on this soil, will form a *marle.*

Some of the worst land of this sort, has heen rendered rich and productive, by the use of this manure.

On thin, sandy, and hot, and gravelly soils. It is no less remarkable than true, that soap-ashes used in these soils, will make them more firm, enrich them, and will be found to answer much better than stable-dung. Those who have never used soap ashes have erroneously supposed, that they are not fit for dry and hot soils. This, however, is a sad mistake. Soap-ashes, like lime or salt, are, in their nature, a very cold manure, but a very rich one in production. The effects of this manure will be seen by the farmer for *seven years* after it has been laid on the ground, if used in the same quantity as dung; while the latter would be more exhausted in *three years* than the former would be in *seven.*

Soap-ashes applied to *light sandy land*, operate as a binder, on account of the quantity of lime which they contain. Lime descending considerably below the surface of the earth, in consequence of the repeated rains, a *bottom* is formed, and other manures are better retained. Several *liberal dressings* with soap-ashes will be required to form a good bottom; and, indeed, some time also, as most farmers use them and dung alternately.

In addition to these numerous testimonies, may be adduced the authority of that experienced mineralogist and chemist, Mr. Kirwan, who considers soap-ashes to be an excellent manure.*

These ashes will prove highly beneficial to soils abounding with undecomposed vegetable substances; as, upon these, the alkaline salt will act powerfully. A confirmation of this fact may be found in the advantage resulting to peat-moss, and low spongy meadows, from the use of soap-ashes.

SECT. IV.—QUANTITY PER ACRE.

From *one hundred, to one hundred and sixty bushels.*†

Mortimer, in his husbandry, directs eight cubical yards per acre.

Mr. Arthur Young recommends *sixty* bushels per acre, to be harrowed in with turnip-seed.‡

Six loads per acre, on wet grass land.§

Seven loads per acre, on wet lands,‖ the immediate effect wonderful.

Ten loads on poor loamy land, the effect very great.¶

One hundred and fifty bushels per acre, on arable land, ploughed in with seed.**

It is not surprising that there should be some slight variation in these quantities; it is not more than occurs every day in the accounts we receive of other manures. There must of necessity, be a variation, in proportion to many circumstances, particularly the quantity of the ashes used; but above all others, the difference in the soils upon which they are spread, must occasion a diversity in the quantities established by practice. Great attention should be paid to the *age of the ashes*, as some farmers have kept them a year, and some have used them immediately. The London ashes being mostly of the same quality, a certain quantity per acre might soon be established.

SECT. V.—CROPS FOR WHICH SOAP-ASHES ARE USED, AND THE MANNER OF APPLYING THEM.

Wheat.—Mr. Mortimer, in his husbandry, says that *six crops* of wheat running, have been taken, after eight cubical yards of soap-ashes per acre, have been laid on.

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* *Malcolm's Compendium of Mod. Husb. vol. iii. p.* 177.

† *Wight's Husb. Scot. vol. iii. p.* 184.

‡ *Bath papers, vol. i. p.* 133.

§ *Lancashire Report, p.* 127.

‖ *Communications to the Board of Agriculture, vol. vi. pp.* 324, 325.

* *Essay on Manures, p.* 18. Seventh edition.

† *Donaldson's Mod. Agr. vol. ii. p.* 228.

‡ *Eastern Tour, vol. i. p.* 292.

§ *Commun. Board of Agr. vol. vi. p.* 324.

‖ *Ibid. pp.* 324, 325.

¶ *Memoir of M. L'Hommedieu, in the transactions of the agr. society of New-York, vol. i.*

** *Memoirs of the Phil. agr. so. vol. ii. p.* 105.

By the assistance of this manure, the ground will not only yield a large crop, but may be sown constantly, without fallowing for many years together.*

Soap-ashes are frequently employed as a *top-dressing* to wheat, in smaller quantities than when applied to pasture, and to great advantage. They are very frequently used in Berkshire.†

In the memoirs of the Philadelphia agricultural society,‡ it is stated, that soap-ashes answer best for clover and Indian corn, for *wheat* and *rye*. They are used in an open fallow, put on at the time of seeding, and ploughed in with the seed; and have been put on after the grain has been sown with very great success, but the other method is preferred.

Barley.—When soap-ashes were harrowed in with barley-seed, the benefit was plainly visible.§

Grass land and clover.—One half of a field of clover was top-dressed with soap-ashes—the dressed part of the field produced double the quantity of *hay* obtained from the other.‖

In Gloucestershire, they are much approved for low meadows over-run with aquatic weeds. They improve the herbage, and produce abundance of white clover.¶

Dr. Cogan, formerly of Bath, observes,** that many persons use soap-ashes in a compost, and that in various quantities. One farmer tells me, that it is often used with *road earth*, in the proportion of eighteen loads of the ashes to thirty of the earth per acre, laid on *pasture land* in the spring; but the following very interesting account will evince that the *above precaution is not necessary nor advantageous.* It was transmitted to me by a plain, sensible farmer. I shall state his practice in his own words:—

"My experience of soapers' ashes is confined to the application of it as a top-dressing on pasture land. About twelve years ago, I agreed with a soap boiler for 1,500 tons of soaper's ashes; I then agreed with an hallier, to deliver it on my farm. I used to apply about *twenty* wagon loads per acre, and a single bushing would let the whole in. I was laughed at and abused by every body for my folly—those wiseacres, alleging that my land would be *burnt up for years*, and totally ruined, &c. &c.; all which I disregarded, and applied my soapers' ashes EVERY DAY IN THE YEAR, Sundays excepted, reeking from the vat, without any mixture whatever.

"I tried a small quantity, (say six acres,) mixed up with earth; but I found it was only DOING THINGS BY HALVES, a practice I never could adopt.

"In defiance of all these prophecies my land NEVER BURNED; but from the moment of the application, became of a dark green colour, bordering upon black, and has given me sometimes more, but never less, than two tons per acre, *ever since*, upon being *hayned, (kept up,)* 42 days, viz. in May and June. The ground I so dressed was twenty-four acres: and I have had one hundred and twenty sheep (hogs of the new Leicester breed) in the ground from August last to this day, (March 2,) but I always allowed them plenty of hay. And although they were culled in August, as the *worst* I had, out of seven hundred lambs, and selected for *this* ground, on purpose to push them, they are now as good as the best I have."

In the communications to the board of agriculture,* it is stated, that in Berkshire, soap-ashes are applied to coarse, wet, grass land, in the quantity of six loads per acre, UNMIXED, with astonishing effect. The value of this manure is well known in the county of Berkshire.†

Turnips.—When soap-ashes were harrowed in, at the rate of *sixty bushels* per acre, with turnip-seed, the use of them was extremely apparent; the turnips were much better than where no manure was laid.‡

This important fact is further confirmed by the practice of R. Moate, Esquire, near Watford, who found precisely similar effects to result from the use of soap-ashes.

We do not hesitate to affirm that a better manure cannot be used for turnip-ground, as nothing so much promotes their growth. Soap-ashes are an effectual preventive for the *black fly* which devours all before it, and which attacks the turnips in dry weather, while they are coming up.—When rain falls, this manure forces the growth of the turnips. If the ground be sown with wheat after the turnips are eaten or drawn off, an abundant crop will be produced. If turnip seed be steeped in the liquor in which soap ashes have been infused, it will be an effectual remedy for the *fly*.§

In August last, (1811,) a gentleman in Hertfordshire, sowed a close of seven acres with turnip-seed, six acres of which he had previously manured with soap-ashes. Although the seed was put into the ground in a bad time, the six acres produced an excellent crop of turnips; while the single acre which was NOT manured with soap-ashes, afforded no turnips that came to maturity: the few that did come up, were soon destroyed by the black fly and wire worm.

Potatoes.—Mr. Townly, of Lancashire, tried soap-ashes as a manure for potatoes, and found the effect very great. Ground which had NOT been manured, produced one hundred and thirty-four pounds; that which HAD been manured with soap-ashes, yielded *three hundred and eighty-three pounds.*‖

Mixed ashes.—Notwithstanding what has been said respecting the use of soap-ashes UNMIXED, some farmers who are in the habit of making composts, may think proper to use these ashes as a material in forming these heaps, and so far as earth is concerned, there can be no objection to the practice. When these ashes are applied to *arable* crops, it seems advisable to sow and harrow them in, previously to sowing the seed, which will prevent the action of any caustic quality on the germination of the young plant. The same circumstance will point out the *autumn* as the proper season for applying them on grass lands, though experiments may be tried with them early *in spring.*

Soap-ashes are eagerly sought after at Liverpool, Hull, &c.; where they are usually mixed with pond, ditch, and river mud, and used in about four months afterwards. This, also, was the method pursued by Robert Thornton, Esq. of Clapham, who used ashes for several years, and thereby greatly improve a very *sour pasture.*

In Cheshire, soap-ashes are usually *ploughed into the land.*

The following is the quantity of *mixed* ashes per acre, used in Surrey.*

Upon strong loams for *wheat*, ten to twelve cart loads.

Upon light loams for ditto, eight to ten ditto.

Ditto ditto *barley*, six to eight and ten ditto.

Ditto ditto *turnips*, six to eight ditto.

SECT. VI.—PRICE.

The price of soap-ashes, when introduced from Flanders about two hundred years since, was as high as *three* or *four shillings* a load.

About thirty years since, soap-ashes were imported into Liverpool from Dublin; but such is now the increasing value and extensive use of this article, that they are all used in Ireland.

In the year 1777, the Essex farmers would readily give from *twelve shillings* to a *guinea* for a wagon load, and fetch it five or six miles, and find their account in so doing.†

At Hull, ten years since, the soap-makers *paid for having their ashes taken away;* they are now sold for *twenty-four shillings* per cart load.

At Ipswich, *twenty-five shillings* per cart load, besides carriage.

In Suffolk, where the soap-makers are farmers, they will never sell any.

SECT. VII.—EFFECTS. *See also*, SECT. V. CROPS.

The various effects on different crops, will be noticed in the following order:

Wheat.—Mr. Thorne and Mr. Knivett, two principal farmers near Ealing have used soap-ashes on *arable* land, with great success and advantage. They have taken the produce of one large soap house between them for several years. These ashes produce clean crops, with neither smut nor weeds; and not only effectually destroy, but also prevent, the approach of the *wire-worm* and *slug* which are so injurious to wheat.

From *thirty-five* to *forty* bushels of corn, per acre, have been taken off land that had been ashed, and had produced a crop of wheat, and two crops of clover; and, that without any other help than a *single dressing of soap ashes.* The land was so poor before, it could not have produced five bushels per acre.‡

M. L'Hommedieu, in a memoir, presented to the agricultural society of New-York, states, that *ten loads* of soap-ashes on poor loamy land, will, in general, produce *twenty five* bushels of wheat, per acre, which defrays the expense of raising the crop by more than one half. The land is then left in a state for yielding a crop of hay, containing from one and a half, to two tons of hay, per acre, for several successive years.

Grass and clover.—Mr. Sherwood of Abbott's Langley, has used soap-ashes with very great success, when mixed with composts.

Mr. Mansfield, near Epping, had a poor sour pasture, that would not mow, nor would stock eat it; a total change was effected by the use of soap-ashes. The soil was strong, wet, and heavy.§

Lord Suffolk, a member of the board of Agriculture, possesses a grass field in Wiltshire, which was manured with soap-ashes nearly twenty years since, and the improvement was very great, and has continued so ever since. A line may be now drawn where the soap-ashes were used.

Robert Thornton, Esq. of Clapham, in some experiments on very sour, bad pasture, amounting to seven acres, found that these ashes added one load of hay, per acre, to the crops. It produced a sweet pasture bottom, with white clover.

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* *Bath papers, vol, ii. p.* 75.

† *Commun. Board of Agr. vol. vi. p.* 323.

‡ *Vol. ii. p.* 105.

§ *Young's Eastern Tour, vol. i. p.* 292.

‖ *Bath papers, vol. i. p.* 133.

¶ *Rudge's Gloucester Report, p.* 272.

** *Commun. Board of Agr. vol. vi. p.* 323.

* *Vol. vi. p.* 323.

† *Berkshire Agricultural Report, p.* 363.

‡ *Young's East. Tour, vol. i. p.* 292.

§ *Transactions of the Society of Arts, &c. vol. v. p.* 47.

‖ *Farmer's Magazine, vol. iv. p.* 56.

* *Malcolm's Compend. vol. ii. p.* 177,

† *Bath papers, vol. i. p.* 133.

‡ *Memoirs of Philadelphia agricultural society, vol. ii. p.* 105

§ *Essex agricultural report, vol. ii. p.* 246.

Mr. Packman, of Rainham, in Kent, had a sour and coarse pasture; the sheep would not eat, and always had the *rot*. This pasture having been well manured with soap-ashes, produced good and sweet herbage; and the sheep became as healthy as any in the county.

In Berkshire, Mr. Billingsly says,* he has applied soap-ashes on very coarse, wet, grass lands, in the quantity of *six* loads per acre, *unmixed*, with an astonishing effect. The rushes disappeared, and gave place to a luxuriant crop of trefoil; and the benefit was so obvious, *three or four years after the application*, that the eye could trace the line of separation. He pronounces these ashes to be much superior, in such cases, to every other manure.

Another gentleman says,† "on pasture ground inclined to be wet, though not sufficiently so as to require under-draining, I have seen the effect to be very striking, particularly in the *second year*. I am convinced that wet lands are preferable from the following fact. I once covered four acres of upland with these ashes, about seven loads per acre. The immediate effect was wonderful. The grass grew famously, and I cut, certainly, thirty-five hundred weight of hay, per acre; the grass came on equally well. The best time of hauling out is, evidently, when the ground is open, and the rain does not fall in such torrents as to wash it away."

A Gloucestershire correspondent, in the *Farmer's Journal* for March 30th, 1812, narrates some interesting facts respecting the use of soap-ashes on old, worn-out pasture land which are a strong confirmation of the circumstance related in pp. 289–90. This correspondent observes that it is now *sixteen years* since he completed the dressing, and that this piece of land is, at the present moment, the best in the parish. He also advises the *draining* of the land before the soap-ashes are laid on. This, of course, applies only to such lands as by their excessive moisture, require the operation. The correspondent was rewarded in the year 1797, by the *Bath and West of England Society* with a pair of silver goblets.

Soap-ashes used on *sour pasture land*, will produce more hay or pasture than any other manure; and are equally good for dressing upland grass. If laid on in winter, this manure will produce a large crop of hay in the following summer, and will afford a greater quantity in a subsequent year. It will also destroy the COUCH GRASS, by rendering it easy for the farmer to throw out the roots.

A better article than soap-ashes cannot be laid on *clover*, in winter, and early in spring. This manure is double the value of *coal-ashes*, and will not cost half the money. Coal ashes are not only very dear, but much inferior in quality, compared with what they were formerly. This arises, in some measure, from the immense quantity of bricks made in the vicinity of London. All the coal-ashes that can be procured, are sent to the brick makers, who pay a great price for them, and the farmer gets mere sand and dirt. If the farmer would once use soap-ashes, he would buy no more coal-ashes; for the former will not only improve his crop of clover, but greatly increase the wheat crop after the clover.

It should be particularly remembered, that the effects of soap-ashes will not be so evident in the first, as in the subsequent years; and that these beneficial effects are not sudden and temporary, but certain and lasting.

Kitchen Garden.—No gentleman or gardener, who wishes to see his plants flourish, should be without soap-ashes, if he can obtain them.—Where they have been freely used, they will destroy all vermin, and prevent *moles* from turning up the ground. These ashes will entirely eradicate the *grub*, which gets into the root of young cabbages, and occasions the CLUB ROOT,* or large botches and warts. This destructive evil, which greatly impedes the growth of cabbages, cauliflowers, brocoli, &c. is never seen where soap-ashes have been used in proper quantities. They prevent weeds, and improve the vegetables in flavor.

Peas and beans, in fields and gardens, will be completely protected from the devastations of *rats* and *mice*, by the liberal use of soap-ashes.

Worms and slugs.—In gardens where dung is profusely employed to force crops of *lettuces*, *radishes*, *onions*, and the like, those crops are very often destroyed by grubs and wire-worms. Were the gardener to lay up his dung in a heap, and cover it over with an equal quantity of soap-ashes, and let it remain for a month or six weeks, mixing it well together, he would have lettuces early, and of a large size, which would not be injured by worms and slugs.

Snails.—A gentleman at Fulham, who had taken great pains in cultivating a large kitchen garden, was greatly pestered with snails; so much so, that he had collected a bushel in a morning, and could not keep them under. This evil was to be attributed, in some measure, to a quick-set-hedge, which separated his land from some adjoining grounds belonging to a market-gardener. Soap-ashes were spread on a strawberry border, next the hedge; and, in twenty-four hours, there was not a snail to be seen on the border, or in the hedge. These enemies to vegetation did not return that summer or autumn; and, by occasionally using the soap-ashes, the ground is now entirely freed from snails in the most wet and hot seasons.

Wall Fruit.—If the snails are carefully picked off the wall fruit, and a quantity of soap-ashes spread on the border, under the wall, the snails will never travel over them. At the same time, an excellent manure will be provided for the borders. The truth of this statement may be easily ascertained. Place a snail upon a few of the soap-ashes; it will immediately quit its shell, and perish.

Plants.—Limed soap-ashes have a strong attraction for carbonic acid, which they separate from the atmosphere, and thus render an important service to plants. These ashes also absorb, with avidity, the night dew in hot weather, and furnish moisture for vegetation during the day.—The following singular instance will illustrate this remark. At Marble Hall, (Surrey) some soap-ashes were, accidentally, placed round the trunk of a poplar tree, to the height of four feet, and remained in that situation, for the space of three years; on removing the soap-ashes, it was discovered, that *seven new roots* had struck into them, from the trunk of the tree.

Gravel walks.—Soap-ashes laid three or four inches in depth previously to putting on the gravel, will bind the walk, render it hard and firm, and effectually prevent the worm from working through.

Parks, Inclosures, &c.—Soap-ashes have been used with much success in parks and meadows.—For *lawns* they are excellent, as they produce a close, thick, clover bottom. Steeped in water, they will destroy the worm in lawns. Manure being so very scarce, they are particularly applicable to new inclosures.

Conclusion.—What an advantage would it be, if, instead of being sparing of manure, farmers would endeavour to increase their number, and to render them more beneficial, by employing them in a more effectual manner. Were this part of rural economy better attended to, and more carefully considered, we should see many places in a state of cultivation, which, on account of the bad quality of their soil, have, hitherto, resisted all our labours to render them fertile.

The expense of *rent and taxes* to the farmer, is always the same, whether his crops be large or small. How important, then, is *manure!* but, infinitely of more consequence is it, to possess a manure, which will last for a long time and be reasonable in price. If the farmer obtain this manure, (and by using soap-ashes he will obtain it,) both expense and time are saved; and crops that would scarcely pay their own charges, are made abundant and profitable.

A good dressing of soap-ashes will last in the land, three times as long as a dressing of dung.

REMARKS.

The editor is indebted for the above essay to the author, an attentive correspondent in London. The utility of leached ashes as a manure is well known in New Jersey and on Long Island, and by a few farmers in the vicinity of Philadelphia.—The price of a single horse cart load at the soap-boilers is two-thirds of a dollar; it is then carted to the wharf (if destined for New Jersey,) and put on board sloops and flats, and taken to the landings up and down the Delaware, and thence hauled as far as seven miles by the farmers.—Great quantities are also taken to Long Island every winter, and much of the improvement there in the lands, and in those of New Jersey, has arisen from the use of this article. Three years since, the editor was informed by Mr. A. Taylor, of Buck's county, of the good effects of the ashes in destroying worms and other insects, a fact strongly proved in the preceding essay.—Knowing the value of this manure, he could not but see last summer, with astonishment and regret, TONS of it not used, near several pot-ash manufactories in Saratoga county, New York, although it might have been had free of cost, and the lands were in great want of it: twelve and fifteen bushels of wheat having been stated to him as the common product per acre!!—*Editor.*

The present price at the soap factories in Baltimore is 5 cents per bushel.—*Ed. Am. Farmer.*

INTERNAL IMPROVEMENTS,

In which the states of New York, New Jersey, Pennsylvania, Delaware, and Maryland, are more immediately interested.

HUDSON AND DELAWARE CANAL.

State of New York,
In Senate, April 22, 1823.

Whereas the legislature of the state of New Jersey has ordered the survey of an inland navigation, to connect the rivers Hudson and Delaware, a communication that cannot fail to produce the most beneficial effects upon the agriculture, manufactures and general industry, not only of that, but of this state.

And whereas the legislature of New York, is desirous of giving a public testimonial of its approbation of this branch of the great system of internal improvement:

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* *Commun. Board of Agr. vol. vi. p. 323.*

† *Ibid. pp.* 324, 325.

* *Prefixed to the pamphlet are two coloured plates of Brocoli roots; one taken from one-half of a bed well dressed with prepared soap-ashes: and which bed produced fine healthy plants, with very few weeds. Another plate representing a root from the other half of the bed, dressed with dung: four out of five plants were affected by the club root, and thrown away; being in a fungous state. The bed was also full of weeds.*—Editor.

Resolved, (if the Assembly concur) That the canal commissioners shall send to the line of the above mentioned contemplated canal one of the Engineers in the employment of this state, (if in the opinion of the commissioners one can be spared,) for the purpose of making a survey and estimate thereof, under the direction of the commissioners appointed by the state of New Jersey, to whom he shall report, as also to the canal commissioners of this state.

Ordered, that the Clerk deliver a copy of said resolution to the Assembly.

(Signed) JOHN F. BACON, Clerk.

State of New York,
In Assembly, April 22d 1823.

Resolved, That this House do concur with the Senate in their said resolution.

By order.
(Signed) E. LIVINGSTON,
Clerk of the Assembly.

CHESAPEAKE AND DELAWARE CANAL.

As the public attention has been drawn to the Chesapeake and Delaware canal, the following information may not be unacceptable.

In 1801, a company of gentlemen were incorporated for the purpose of making a canal to connect the tide waters of the Chesapeake, with those of the Delaware bay.

In 1803 and 1804, Benjamin H. Latrobe, Cornelius Howard and John Thompson, surveyed almost every part of the peninsula which appeared suitable for canalling, and maps, plans and estimates were made of various routes for this canal; which being laid before the board of directors, they decided in favour of a route, which commencing at Welch Point on Elk River, about six miles below Elkton, crossed the peninsula obliquely in a north easterly direction, to Mendenhall's landing on Christiana creek, about four miles above Wilmington, from whence to the Delaware, a distance of six or seven miles, this creek has a depth of 10 or 12 feet of water at high tide. A canal along this route would be about 21½ miles in length, have a summit level of about 13 miles in length, and would require 20 locks, including the two tide locks. In 1822, Wm. Strickland, of Philadelphia, surveyed a route for this canal, which commencing on the Delaware, about 40 miles below Philadelphia, at a place about half a mile above fort Delaware, erected on Pea Patch Island, crossed the peninsula nearly at right angles, and arrived at Welch Point on Elk river, by a route 17¼ miles in length, three miles of which would be through Back creek, where the water is from 8 to 24 feet deep at low tide; a canal following this route would have a summit level five miles in length, and requires 18 locks, including the tide locks.

In 1823, John Randel, jun. of Albany, surveyed a route for this canal, which commenced and terminated near the same points with that laid out by Mr. Strickland, would have the same length, but its summit level would be one mile in length, and 16 locks would be needed, including the two tide locks.

Each of these plans depended for their supply of water upon Elk river and White Clay creek, both of which could be carried to the canal as laid out by Mr. Latrobe, by two feeders, which, together, would amount to a length of 17 miles; to the route laid out by Mr. Strickland, by 20 miles of feeder, and to the route laid out by Mr. Randel, by 22 miles of feeder.

In 1804, Mr. Latrobe estimated the supply of water which could be derived to the canal from Elk river, at 190 locks full per day, which would be sufficient for the passage of about 38 vessels across the summit. In 1807, he estimated the daily supply at 144 locks full, which would pass 29 vessels daily. In 1823, Mr. Randel measured this stream, and found its averaged daily supply for the whole year, amount to only 79 locks full, which would pass 16 vessels across the summit; but that in the months of July, August, September and October, the daily supply was only 30 locks full, and would be competent for the passage of 6 vessels across the summit, or 3 each way the whole length of the canal. The supply of water from White Clay creek will be about equal to that from Elk river.

The route recommended by Mr. Randel is located at a place where the tide of the two bays have originally approached within 4¼ miles of each other, and were separated by a hill consisting apparently of gravelly loam, having an averaged height of only 35 feet above the level of the tide. By the plan last mentioned, this canal was to have been carried upon the level of the tide, from which it would receive its supply of water to the east and west foot of this hill, and the locks which were required to surmount this hill, were to be fed from the beforementioned streams. The plan which he recommends as the *most* eligible for this route, is to cut down this hill to the depth of the canal below the level of flood tide; to have a tide lock at each bay, which would make still water, and prevent a current in the canal, and to feed the canal from the Delaware, having the ocean for its reservoir. Should this plan be adopted the extra cost of deep cutting would, Mr. Randel thinks, be more than balanced by the saving in making 17 miles of feeder, 18 locks, 100 acres of reservoir, purchasing from 7 to 10 water-rights, together with aqueducts, culverts, &c. with the cost and disastrous contingencies to which they are liable, even though no account be made of the abundance in the supply of water. And should the deep cutting prove to be, as its external surface indicates, a canal for ships can be made to connect the two bays, at a cost not exceeding that of one for sloops, if carried across the hill by locks, and fed by the abovementioned streams.

Shafts have not yet been sunk to test the kind of earth to be removed from the deep cut. This Mr. Randel is to do as early in the season as his other engagements will permit.

Benjamin Wright, of Rome, is also appointed to explore this peninsula, and report for this canal the route which he may think most eligible. Should this latter plan be adopted and vigorously pursued, in four years time ships might pass from Philadelphia to sea by the way of the Chesapeake. The water communication between Philadelphia and Baltimore would be shortened about three hundred miles; and the produce from the Susquehanna, when at Havre de Grace, would, by this route, be within about twenty miles as near to Philadelphia as to Baltimore.

When this canal shall be completed, there will only remain the New Jersey canal to be made, to give an inland water communication from the Capes of Virginia to Rhode Island, which in time of war would be invaluable.—This canal was laid out by Mr. Randel in 1816, (twenty-nine miles in length, and sixty-eight feet above the tide,) under commissioners appointed by the legislature of New Jersey. It was intended for the passage of sloops, but could be made of dimensions competent for the passage of ships, at a cost not exceeding about 25 or 30 per centum above that of constructing the Chesapeake and Delaware canal, and would shorten the water communication between the cities of Philadelphia and New-York about one hundred and eighty miles.

If in addition to these canals, the ship canal projected by E. C. Genet, Esq. and laid out by Mr. Randel in 1819, under commissioners appointed by the legislature of New-York, be made from Albany, a distance of thirteen miles, to the deep water at New-Baltimore, (which would not exceed about half of the cost of the Chesapeake and Delaware canal,) then the termination of the Erie and Champlain canals at Albany would be accessible by ships as well as coasting vessels, by an inland communication from any port between Virginia and Rhode Island.

It will at once be perceived, that as the water communication between Virginia and Lake Champlain would be nearly in a northerly direction, every mile you advanced along it would give a change of latitude, and a consequent change in the productions of the earth, as well as in the wants of the inhabitants. The advantages which would result from canals giving such facilities for the exchange of the products of different climates, and of friendly intercourse between the citizens of different states, could not fail to be productive of the most salutary consequences, both in a pecuniary as well as moral and political point of view.

[*Albany Daily Advertiser.*

* * *

In one of the papers of the Spectator, upon the miseries arising from the gloomy forebodings of dreams, and sombre thoughts of death, known to be written by the celebrated Mr. Addison, is the following:—

"I know but one way of fortifying my soul against these gloomy presages and terrors of mind, and that is by securing to myself the friendship and protection of that Being who disposes of events and governs futurity. When I lay me down to sleep, I recommend myself to his care; when I awake, I give myself up to his direction. Amidst all the evils that threaten me, I will look up to him for help, and question not but that he will either avert them, or turn them to my advantage. Though I know neither the time nor the manner of the death I am to die, I am not at all solicitous about it; because I am sure that he knows them both, and that he will not fail to comfort and support me under them."

These were the sentiments of that eminent man, who so much instructed, amused, and improved the age in which he lived, and whose name is handed down to posterity. The quotation I have made is in the commencement of the Spectator, and I find, on reviewing his numbers for Saturday, that they contain so fervent a strain of piety, and so beautiful a system of good morals, and are conveyed in so impressive and agreeable a manner, that I cannot but believe they would, if more generally read by young persons, greatly tend to their advantage.

The mind of one not estimating the importance of a life of piety, and under the anxieties of a life of the opposite course, would, I should think, receive some salutary impressions upon the subject, when he comes to see how exactly the death of Mr. Addison accorded with his opinions while living; for we read, and the fact is universally acknowledged, that this great man, who, in 1710, penned these sentiments for the edification of the public, did, in 1719, upon his death bed, attest the truth of them: for, on that solemn occasion, he directed the young Earl of Warwick, his stepson, to be called to him, who, desiring with great tenderness to hear his last injunctions, was answered—it is to shew you how a Christian can die! and then closed his eyes forever.

What reflections ought we to draw from this lesson? I think we ought to ask ourselves seriously if we are in this state of serenity. If we are not, we ought to endeavour to attain it. It may be obtained by following the precepts of Him who loved us more than we love ourselves, and it will in the end be of more value to us, than all other acquisitions.

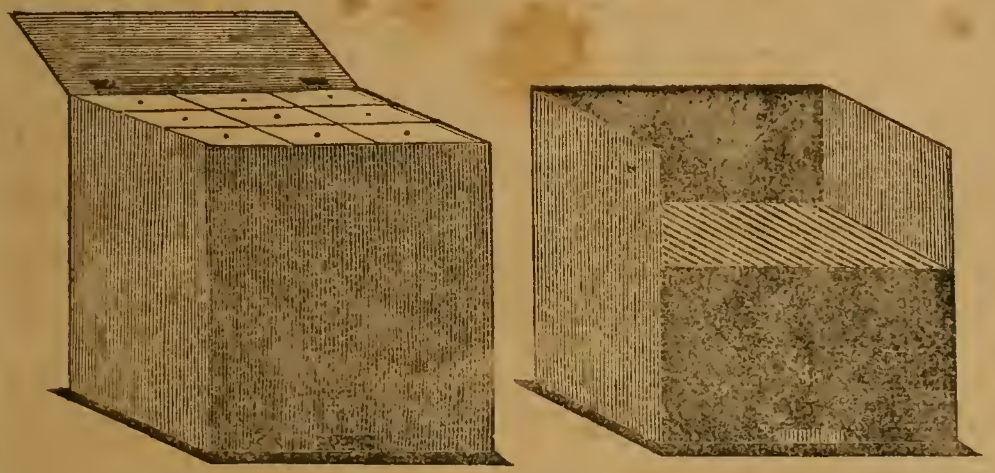
Z.

IMPROVEMENT IN THE
CONSTRUCTION OF BEE HIVES.

Newburyport, March 3d, 1823.

John S. Skinner, Esq.

Dear Sir—I observed in your paper, No. 48, Vol. 4th, an extract from the National Gazette, recommending the method practised in Germany, of gathering honey, as being easier than that of India, and more merciful than that of this country, which induces me to think that Blake's patent bee hive, had never been examined by the writer—as honey can be taken from a hive of that kind, and if too much be taken the bees can be furnished without using in one case, herbs, gloves, cap and mask; and in the other lifting the hive to feed them from a saucer—and besides it is well known, that most of the white comb is put in the top, therefore in taking out a box, as described by the plate, and replacing it by another, the bread, &c. of the bees is not disturbed. I enclose you a drawing of the hives, a copy of the schedule referred to in his letters patent, and making part of the same, containing Mr. Blakes description of his improvement, in the construction of the bee hive.



"This improvement consists in the construction of a hive, so that any quantity of honey, from a very small portion, to nearly one-third part of the whole, may be extracted at any time from the hive, without any serious injury to the bees, or without the destruction of any of the lives of those valuable little animals, and so that whenever there is a deficiency of honey for the support of the bees, or no more than is necessary for the purpose, it may be supplied or taken away at pleasure. Let a square box, of the size of the common hive, or any other convenient size, be made of pine, or any other suitable wood.—Let a number of bars be placed horizontally, at about one-third part of the distance, from the top of the hive, so that the space between each bar shall be about two-fifths of an inch. Let any number of separate boxes, say nine or more, or less, be so made, that they shall fill up the whole space above the bars mentioned, with any convenient thing inserted in the tops of the boxes, for the purpose of extending them at pleasure, and let there be a cover to be placed over the whole, in such a manner, as may be thought most convenient."

(Signed) EDWARD BLAKE.

I would also observe, that I have several of those hives preparing, and am confident, they will answer a valuable purpose—the cost is very trifling, and those who purchase the rights of vending to the several states and counties, charge only about $2, to each farm or individual for the privilege. Mr. Blake's residence is in the town of Hartford, County of Oxford, state of Maine, unless he has removed within a few months.

Respectfully, your obedient,
BENJAMIN POOR.

From the National Gazette.

BEES.

I have seen on the great heath of Luneburg in the Hanoverian dominions, hundreds of hives that were carried there from distant places in the spring of the year, for the bees to pasture on the heath flowers: herdsmen attend them, and in the autumn they are taken home again.

The mode of securing the honey is this: early in the fall the bee father (as the person who cultivates bees is called,) protects himself with gloves and a kind of cap long enough to hang over his neck and shoulders, and which has a wire mask—and in dark rainy weather, or early in the morning or late in the evening, when all the bees are at a home, he turns the hives upside down—a match made of dry herbs, such as rue wrapped in tow and linen, which burns without flame and makes a great smoke, is lighted and the smoke blown upon the hive, and gives him an opportunity of taking what quantity of honey he thinks they can spare, leaving a sufficiency for provision. Should it happen that the bee father takes too large a tribute, or that an early winter prevents the bees from replenishing their stock as expected—they then are regularly fed with a composition consisting of sugar, honey, wine and water, boiled together, which is put in a saucer under the hive.

TO DESTROY THE BEE MILLER.

This troublesome insect is making great ravages among the bees in this vicinity. A subscriber has requested us to state that he had discovered an effectual method of destroying them, which is as follows: To a pint of sweetened water (sweetened with sugar or honey,) add half a gill of vinegar; set this in an open vessel on the top of the hive, and at night, when the miller comes to his work of destruction, he will prefer this composition, and diving into it, will immediately drown. This simple method, our correspondent assures us, is certain success. At all events, it is worthy of attention; and we would recommend to the owners of bees to make a trial of it.—*Lake George paper.*

TO THE EDITOR OF THE AMERICAN FARMER.

Dear Sir—Since I wrote you upon clay and sod burning, I have perused the book you kindly sent me, published by Mr. Gresenthwaite, entitled "*Theory* of agriculture," in which sod burning is condemned, "because every hundredth "part so burnt, is reduced to ten, and consequently ninety parts are lost—paring and burning have been approved, from the supposed "value of ashes, left after such an operation, but "the approbation will be very much diminished, "when it is remembered that burning adds "nothing to those ashes. That it removes all "the oxygen, hydrogen, and ninety nine parts "out of every hundred of carbon, and the saline "bodies discovered before—existed before in the "entire vegetable." I know not to what chemical work he can refer, to prove, that a decayed vegetable will leave a salt. We plough our land, to destroy blue grass, as it is termed by frequent exposure of its roots; do they leave any thing like burnt roots, turned to ashes? this must be proved, before his conclusions can be verified—in my woods I find stumps and sticks, which would all decay, and be washed by heavy rains into the Potomac—by burning these I surely gain; on my farm, there is the remains of a brick kiln, where the vegetation is always luxuriant, on this spot bricks were made 20 years ago—I can only attribute the great luxuriancy of vegetation there, to the bricks absorbing the moisture of the nocturnal dews, and giving them out every day—if you weigh a salmon brick, in the summer, after it has been exposed to the sun, and weigh it again early next morning, and you will find that it has increased very much in weight—I think Sir Humphrey Davey, (his work I cannot now refer) says that a good soil may be ascertained by a thermometer, for if it heats quickly, and cools quickly, it is a good soil. That alkaline salts attract moisture, is ascertained by taking the stopper out of a bottle, in which it is contained, for the salt will soon be all dissolved—how the ashes operate upon the substances in the soil I know not. Mr. Beatson has published his facts, and on perusing his work, having followed his practice, and having experienced its good effects, I communicated them to you—facts must supersede theories—my neighbour had ears of corn on one stalk, where he applied burnt clay and ashes—stable manure causes weeds, and also soon evaporates during our hot summers, and under repeated ploughings for a corn crop, it also frequently burns—whereas, burnt clay or burnt sod and ashes, do not. My neighbor, a superior practical farmer, informs me, that the last mentioned manure operates more favorably here than in England or Ireland. I have written these suggestions, lest the reader of the "*Theory of Agriculture*" above referred to, should deter them from making experiments to confirm or invalidate Mr. Beatson's plan.

Let me avail myself of this occasion, to return my thanks for the various seed you have sent me; these attentions are a proof of your zeal to benefit your country, by disseminating whatever promises to be useful. The congress has 200 acres in Washington city, which have remained a waste—if a scientific gardener had been placed on this ground after it was enclosed, what useful experiments might have been made—what plants and seeds might have been brought by our patriotic captains of ships, and what supplies your activity would have afforded. Thirty years have elapsed and these acres remain a waste. Pardon this digression—my heart dictated and my hand obeyed. My neighbor says, that he finds burnt sod or clay preferable to the best stable manure.

THOMAS LAW.

FOR THE AMERICAN FARMER.

FLAX DRESSING MACHINE.

To Wm. M. Barton, Esq.

Dear Sir,—I beg your acceptance of a sample of flax for the inspection of the "Valley Society of Virginia." The bleached sample is from flax that was water-rotted, the dew-rotting being found not to answer for that process. Of the dew rotted parcel, I must remark, that the quality of the flax is not considered to be the first—all of this year's crop being very inferior, and all of that which is dew-rotted, at any time, whatever the quality may have been previously, sustaining so much injury from the process as not to entitle it to first rate, however well cleaned it may be. I cannot, therefore, present this as very fine in quality, but beg your attention to the dressing of it. This was done by a machine of small dimensions, simple construction, and exceeding durability, invented by Mr. Rodman Goodsell, of Oneida county, New York. With this machine, driven by one horse, a man will break, hatchel, and dress clean enough for the distaff, 100 lbs. per day —and with the same thresh 100 bushels of grain per day, the latter without one cent extra expense. As your county is celebrated for its wheat culture, Mr. Goodsell and myself have determined to send one of them to you in the course of a month. Should it arrive in time for your March meeting, please to do us the favor to call the attention of the gentlemen of the society to its performance, and drop me a line of the impression it produces. The price of each machine is $100—that is, we furnish the machine and give the right to use it for that price, the purchaser paying, of course, the expenses attending the erection of the same, together with such incidental charges as may attend its transportation from the place where it may be manufactured.

I am, with great respect,
Your obed't humble serv't,
SAM'L SWARTWOUT.

New York, 6*th Feb*. 1823.

The Flax Machine may be driven either by water or horse power.

One horse is sufficient to turn one or more of these cylinders. The cylinder for dressing or threshing requires to be driven at the rate of about 160 or 170 revolutions in a minute. Any millwright will make the calculations for the size of the large wheel, when intended for water power. For horse power, our large horizontal wheel attached to the horse shaft, is 12 feet diameter—around this we put a strap, 5 or 6 inches broad, of harness leather—this strap runs round the shaft or axis of the second large wheel, upon a whirl 18 inches diameter. There is a wheel for a strap or band upon one end of this axis 6 feet diameter, over which another strap of the same breadth and thickness, as that which runs over the large wheel, descending into the room below, and is attached to and runs over a small whirl fixed upon the axis of the cylinder. This latter whirl is 8 inches diameter. The above calculations are made upon the supposition that the horse walks three times round his path in a minute—the diameter of his walk being 24 feet.

AN EXPEDITIOUS METHOD OF MOVING HAY.

Culpepper County, Va. July 7th, 1821.

Mr. Skinner,

In the last number of your American Farmer one of your correspondents has described an expeditious mode of drawing hay to stacks, in use in Hardy county, Va. The same method was formerly adopted by some farmers in this county; but that now most generally used here, seems to be so much more easy and expeditious, that, perhaps, a description of the mode may deserve a place in your useful paper. So slow is the progress of even small improvements in agriculture, and labor saving operations, that it is probable many of your readers have never seen this practised.

The hay being cocked, and the stacking about to be commenced, a hickory pole ten or twelve feet long, is procured, and the knots all well trimmed off. The larger end of the pole should have a hole bored in it, to admit a clivis pin, and to which the swingle tree of the horse in gear, is to be attached by means of the clivis. The smaller end of the pole should be brought to a smooth point, so as to admit its being run under the cocks of hay, and a leading line should be attached to the large end, about where the clivis goes through. A boy, holding this pole in one hand, thus fixed to the horse, and guiding the horse with the other, comes to the cock of hay. The pole is immediately disengaged, by taking out the clivis pin—the boy then runs the pole under the cock, till the sharp end has passed a little distance, say two or three feet on the other side: he then throws the line attached to the large end of the pole, across the top of the cock, and by a slight bow knot fastens it to the pole on the other side, taking care to have the rope placed exactly over the middle of the cock—the horse is then attached to the pole by fixing in the clivis; just as the horse sets off, it is necessary to take hold of the pole just behind the place where the rope is tied to it, to prevent its slipping, until the cock moves, when there is no longer any danger. After getting with the cock to the stack, without its being necessary even for the horse to stop, the knot is slipped, and the horse goes on with the pole, leaving the cock in nearly as good a situation as when it was first touched. There is less work for the hand-rake after the cocks thus drawn, than in the mode described by your correspondent, and the draft is much less. One horse will draw, with ease, cocks of three hundred weight, and as fast as two can pitch up to one stacker. The draft is less, in consequence of the hay next the horse being somewhat raised from the ground, and the friction against the ground greatly reduced.

Your constant reader,
A YOUNG FARMER.

The date of the preceding shews, that though we may, for a time, overlook good suggestions, we do not altogether lose sight of them.

Ed. Am. Farm.

TO THE EDITOR OF THE AMERICAN FARMER.

Dear Sir,

A farmer in Anne Arundle county, (a friend of mine) said to me a few days ago, he wished I would again say something to you about the use of plaster and slacked ashes in planting corn. I told him I had already said enough on that subject, and if farmers would practice it agreeably to my method, I was convinced they would be benefited by the experiment, and be corn-sellers instead of corn-purchasers; and lest it may have escaped the notice of some, I will again at *his* request repeat my practice, which if you think proper, you may notice in your most useful paper.

Last fall twelve months, I had my corn ground ploughed as deep as it could be turned by two horses, and left it exposed during winter to frost and rain; in the spring, it was as light as an ash heap. I again gave it a deep ploughing, then listed and planted my corn, (as early as it was prudent to do so,) planting a large handful of plaster and slacked ashes mixed; one-third of the former and two thirds of the latter, which was dropped on the seed and covered up together. The early spring showers of rain were absorbed by the loose ground, and the plaster and ashes brought soon into action upon the young plants, which grew off finely, and my corn was made before the dry weather in July and August could affect it, and from twenty-five acres of ground, I made 185 barrels of corn, measured and lofted; from which I was able to sell fifty barrels from the loft, and had sufficient for the year's use. I dont know of any farmer within ten miles of me, that made corn sufficient for their families, owing to the great draught last summer, and am convinced, had they practiced the same method, the same success would have attended them. G. W.

STRAWBERRIES.

Frederick County, (Va.) June, 1821.

Sir,—On the subject of that delicious fruit called the strawberry, I wish to solict through the medium of your journal, some information. My vines are thick and luxuriant; they blossom well, and then blight. This has been the case, for the three last years: how can the blight be prevented? I hope that some of your numerous readers, will be able to give me the required information.

Very respectfully your's,
R. K. M.

UNIVERSITY OF MARYLAND.

It is with feelings of pride and exultation that we observe not only the annual increase of her students, but also the appearance and conduct of the young gentlemen, which demand the warmest approbation of our citizens. We were delighted to remark during last session that the fact of being "a student of the University" was considered by our best society, as a sufficient passport to their houses and hospitality. The Commencement took place on the 5th instant, and we were much pleased to find the chemical hall fitted up very handsomely for the occasion, and crowded at an early hour by a highly respectable audience, made infinitely more interesting by much of the youth and beauty of the city and neighbourhood, the gay decorations of whose dresses relieved the sombre solemnity of the scene and produced a charm and an interest which the society and approbation of *woman* alone can impart.

The procession entered the hall at eleven o'clock, and took possession of the seats allotted to them. First, the *Graduates*, two and two—the Dean of the Faculty of *Divinity*, followed by the Professors, two and two. The Dean of the Faculty of *Law*, followed by Professors in the same manner. The Dean of the Faculty of *Arts* and *Sciences* attended in the same way Then the Dean of the Faculty of *Physic*. On Professor Davinge (the father of the institution) and Professor Pattison making their appearance, they were received with three distinct bursts of applause by the whole assembly. The Rev'd the *Provost* followed the *Professors*, and the *Regents* closed the procession.

The Professors having taken their chairs with their respected Dean (Dr. De Butts) at the head of the table, Dr. De Butts read the "*mandamus*," and the Right Rev. Bishop followed by prayer. The young gentlemen were then asked a few questions by the learned body, touching the subject of the different thesis: and having received their degrees, the commencement concluded with solemnity. We cannot close this article without adverting to the complete realization of the sanguine expectations which we have all along entertained in regard to the rapid growth of this most flourishing institution; and we are gratified to observe the pride—the well grounded pride, which the whole population of our state evince in this their school, which is not second to any in our country, nor perhaps in the world. We shall only add—"*Palmam qui meruit ferat.*"

Our readers will be able to judge of the rise of the school by the following list taken from the books of the University:—

In 1820—21, the number of the students was - - - - - - - 115
In 1821—22, - - - - - - 247
In 1822—23, - - - - - - 303

[*American.*

Editorial Correspondence.

GUINEA CORN—BEANS, &c.

Mr. Skinner—

"Accompanying this you will receive a head of guinea corn, and a small parcel of the snap bean for table use, both of which Mr. R informed me he did not recollect to have seen before.

The guinea corn is extremely productive—it is, as you will perceive, very white and compact on the ear. It is very good for table use in lieu of rice or small hominy, and is the best food for poultry. It is also valuable food for horses. It branches from the root, and every stem will bear an ear on the top—it suckers from almost every joint, which also bears an ear on the top, and is, in mild seasons, perennial. In the year 1821, in the course of my travelling through the state of Alabama, I met with the beans. They are planted in the rich lands of that country, in the corn hills, and run up the stalk. I think, however, they are injurious to the corn—the weight of vines and leaves are apt to break down the corn The bean is very tender until the hull becomes yellow, and the strings are much easier separated from the bean than any other kind that has come within my knowledge. I planted them in my garden and put up poles for them to run on—they are very prolific, and if not known in your neighborhood, will be a great acquisition to the kitchen garden."

The beans and corn have been distributed.—*Ed. Am. Farmer.*

Bridgeton, W. N. Jersey, April 21, 1823.

Sir,—It would give me pleasure (and I have no doubt but many others would participate with me,) to see from the pen of Samuel Black, of Delaware, the writer of an essay published in the second volume of the Farmer, a description of his experiments in farming for the last four years, with a statement of the result both with respect to his crops, and the improvement of his farm land. If his theory, as stated in that essay, will stand the test of experiment fairly conducted, he must have by this time eight inches of good soil and that not only without expense, but with a handsome profit. Now if his former calculations are established by experience, it will add new vigour to the exertions of enterprising improvers and make them look forward to Mr. Black's third course, which is to prodoce twelve inches of good soil, as an object not altogether beyond their reach. I Mr. Black will practically show that twelve or even eight inches depth of soil, naturally sandy, can be made *good soil*, and that without expense, he will perform a service to his country which ought never to be forgotten.

That twelve inches of soil and even more, can be made in some soils, I know very well; but am fearful it will not be easily accomplished in a sandy soil. I paid a visit last week to the seat of John Hare Powel, Esq. near Philadelphia, where I saw a plough drawn by two pair of fine large oxen running to the depth of seventeen inches, which I ascertained by actual measurement in different places; this was in an elevated situation, and Mr. Powel informed me that the soil was not naturally deep, but had been made by himself—this however was not a sandy soil.

In an editorial note on the essay of Mr. Black's, you state that much of the soil in the vicinity of Baltimore, requires large supplies of manure annually repeated; or in the language of farmers, it will not hold manure. Can you inform me, whether the capacity of this soil to retain manure has been increased by the application of lime, which from another note, I learn has been very bountifully applied by some of your farmers. I feel much interested in receiving *experimental* information respecting the application and effects of lime on sandy soils.

Your's respectfully,
EPHRAIM BUCK.

ON THE EFFECT OF WAR AND HIGH PRICES.

Kingston, (Tenn.) 30th March, 1823.

Sir,—In the Farmer of the 14th inst. you rather appear to hope that the war approaching in Europe, may eventually be the cause of increasing the value of the products of the United States, and that it might be beneficial to the farmer. I have never yet seen what general good was produced by high prices, but think it has brought more misery on the farming class, than any thing else that ever happened to them; I therefore hope war may not take place, and if it does, I hope it may not raise the price of the staple products of the country—to entail such misery as is sure, to follow; a few might and would be benefitted by it, but misery would follow to twenty where one would be benefitted, and the manufactures of the country would suffer by it.

SAMUEL MARTIN.

ENQUIRY ABOUT FAMILY WOOL AND COTTON SPINNER—ANSWERED.

Sir—I notice, in your paper of the 14th inst. a query—if a *wool-spinning machine*, invented by a Mr. Brown, (of which I am the owner, in part, of the patent right,) will spin *cotton* as well as *wool?* The principles of the machine are precisely those of the common spinning wheel, which we know is used for both purposes; I have no doubt that this machine is as well adapted to cotton as wool—and from the little experiment I have made since I noticed your communication on the subject, I am more fully confirmed in my conjecture. But as the spinning of cotton by hand machine, cannot be an object of consequence to us in this part of the country, we have never given it our attention.

The machine, for the purpose intended, is a most perfect and useful domestic implement, and a thing which gives general satisfaction to every one who has used it—its cost here is from 18 to $30 according to the finish: one should be delivered in Charlestown, in good order, with suitable directions for its use, free of freight, for 30 dollars Have the goodness to give this communication to your correspondent as soon as convenient—and oblige yours,

J R. NEWELL.

Any communication on the subject, addressed as above, will be duly attended to.

Boston, 31st March, 1823.

LONG ISLAND PIPPINS.

We are informed that Mr. Henry Mitchel, of Flushing, Queen's county, gathered last fall from one tree, eight barrels of apples, six barrels of which were sent to Liverpool by one of the line of packets as an adventure. The captain was requested to return him the proceeds in British sovereigns, thirty of which, amounting to $133 33, were lately paid over to Mr. Mitchell, exclusive of freight and commissions. Such is the celebrity of Long Island pippins throughout the world, and so important is the cultivation of good fruit.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

Baltimore, April 7th, 1823.

A report of the tobacco inspected at, and delivered from Dugan's Inspection Warehouse, during the quarter, commencing on the first Monday in January, and ending the first Monday in April, in the year of eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	118	41		159
Number delivered.	522			522

True copy from the book.
Very respectfully,
Your obedient servant,
R. WATERS, Inspector,
Dugan's Warehouse.

TREASURY OFFICE, ANNAPOLIS, April 12th, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

Baltimore, 7th April, 1823.

A report of the tobacco inspected at, and delivered from Williams and Donall's Inspection Warehouse, during the quarter commencing on the first Monday in January eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected	Total.
Number inspected.	344		54	398
Number delivered.	204			204

A true copy from the books.
Very respectfully,
Your obedient servant,
JOSIAS STEVENSON, Inspector.

TREASURY OFFICE, ANNAPOLIS, April 12th, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco Inspected at and delivered from Upper Marlboro' Warehouse during the quarter commencing on the seventh day of January, eighteen hundred and twenty-three, and ending on the seventh of April, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	31			31
Number delivered.	69			69

SCOTT & SASSCER, Inspectors.

TREASURY OFFICE, ANNAPOLIS, April 12, 1823.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

PATERSON MANUFACTORIES.

Rejoicing in every circumstance which has a tendency to render our country independent of the rest of the world, and to develope its enterprise, ingenuity, wealth and resources, we cannot but hail with delight such intelligence as the following, let it come from what quarter it may; but we must, in candor, confess we enjoy it with a peculiar zest when it relates to a portion of our native state, to whose prosperity and honor we are, from affection and gratitude, most heartily devoted. But to the information:

The "Voice of Passaic," published at Paterson, (New Jersey,) enumerates the following manufacturing establishments in that town:

Ten cotton factories, having now in operation twenty thousand spindles.

New factories erected, which, in about three months, will put in motion twenty thousand spindles more.

Making 40,000 spindles employed in spinning cotton.

Three extensive woollen factories.

Two large duck factories, supplying, in a great measure, our navy with canvass, and working up more than a ton of flax per day.

Three manufactories of machinery, one of which is stated to be the most extensive and complete in the United States.

Three very extensive bleach greens.

Two brass and iron founderies.

Besides paper, grist, saw, rolling, and slitting mills, &c. &c.

With the great natural advantages which Paterson possesses, and the prospect it has of deriving, at no very distant day, immense benefits from the contemplated canal from the Delaware to the Hudson, we may venture to predict that it will soon attain to a degree of usefulness and importance of which every Jerseyman may well be proud.—*True Am.*

SIGN OF FLODDEN WELL.

A Scotch innkeeper, who had determined on adopting the sign of Flodden Well, was much puzzled for a suitable inscription. At length he waited on Walter Scott, and asked aid, observing, that "as he had written so much about it, he might ken something that would do for an inscription." The worthy poet immediately replied, "why, man, I think ye cannot do better than take a verse from the poem itself." The innkeeper was very willing to do this, when Mr. Scott said to him, "Why, then, you have just nothing to do, but to leave out one letter, and put for a motto—

Drink, weary traveller—drink and PAY!

instead of *pray*, which you might not attend to so punctually.—*Dumfries Courier.*

THE FARMER.

BALTIMORE, FRIDAY, MAY 2, 1823.

THE MARYLAND AGRICULTURAL SOCIETY.

At a special meeting of the Maryland Agricultural Society, held agreeably to public notice, in the city of Baltimore on Monday last, the 28th day of April, Robert Smith, President, having taken the chair, James W. M'Culloh was, in the absence of the Secretary, appointed Secretary pro tem.

The attention of the meeting was then called by preliminary and appropriate remarks, to the consideration of several important resolutions, that were submitted by Lloyd N. Rogers, and which, with slight modifications, were severally adopted by the meeting, after a free interchange of opinion among the members.

1st.—*Be it Resolved*, That it is expedient in the opinion of this meeting to form "the Maryland Agricultural Society," into two independent societies—one for the Eastern, and the other for the Western Shore of this state.

2dly.—*Resolved*, That a Committee, consisting of John S. Skinner, Benedict W. Hall, Lloyd N. Rogers, and James W. M'Culloh, be appointed to frame a constitution to be submitted on Monday, the 23d day of June next, to the members of this society, for their consideration and adoption; and that said committee be instructed to provide therein for the annual election of a board of Trustees to watch over the affairs of the society—and further, that they be especially instructed to insert an article in said constitution, conferring honorary membership on all members of the society, who reside upon the Eastern Shore, and on all those who may hereafter become members of the new society on that shore, should an independent society be organized there in pursuance of the above resolution—and said committee are hereby further instructed to provide for the continuance of the right now enjoyed by all persons residing in that section of the state, to compete on equal grounds, for all premiums at our future exhibitions.

3dly.—*Resolved*, That the next cattle show of this society, on the Western Shore, shall be held in the autumn of the present year; and that the former committee of arrangement be, and they are hereby authorised and requested to publish a list of premiums, amounting in all to $500, to be awarded at the aforesaid show, as soon as they can conveniently designate the objects for which they may deem it most proper to offer rewards.

4thly.—*Resolved*, That the committee charged by this meeting, with the formation of a constitution, be instructed to transmit a copy of this and the foregoing resolutions, to the Hon. Edward Lloyd, Vice President of the Maryland Agricultural Society, and to ask his assistance to obtain for them a special conference, with a committee to be appointed by the members resident on the Eastern Shore, upon topics connected with the interests and objects of our association.

The society having adopted the above resolutions, they elected Robert Sinclair, a member of the committee of arrangements for this shore, *vice* Dr. James Stewart, who had previously resigned.

ROBERT SMITH, *President.*
JAMES W. M'CULLOH, *Sec'ry pro tem.*

The following extract from Dr. JOHN S. BELLINGER, *ought to have accompanied the distribution of the Peas—the receipt whereof was noticed in No. 2, vol. 5:*

"I thank you for the peas and the millet seed—I send you three parcels of early peas—of each kind two crops can be obtained in our state. No. 1, (Warley peas) presented me by capt. Warley, of Colleton district. No. 2, (Deas' peas) by T. H. Deas, Esq. of Charleston; and No. 3, (Searight peas) by Mr. Searight, who keeps a public house in Lexington district, on the road to Columbia—who informs me he found great benefit from their cultivation, with an early and late crop of them. I shall be pleased if all or either of them prove, on trial, worthy the notice of the farmers of your state."

COMMERCIAL.

A letter from Liverpool, of the 14th March, after stating an increased demand for tobacco, and that sales since the 1st of the month amount to about 800 hhds. the letter proceeds—"The prospect of war has created great activity in bread stuffs. Wheat has advanced within the last week 1*s.* per bushel in almost every part of England, and from the lowest point, six weeks ago, the general advance may be fairly put down at 40 per cent. English Flour has advanced in about the same degree. A pause took place in the last London market, which has caused to-day a partial reduction of *3d* per bushel in this market."

There has been another arrival at New York, but it brings nothing new.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7 50—Howard st. Superfine, $7 25—fine do. $6 75—Wharf, do. $7—Wheat white, $1 55 to 1 60—Red do., $1 50 to $1 55—Rye, 80 cents—Corn, 60 to 63 cents—country Oats, 50 to 55 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3 50—Herds' Grass do. $3—Timothy do. $4 50—Millet, $3—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $3 62½ per bbl.—No. 2, $3 37½—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb—Eggs, 18¾ cts. per doz.—Hay, $18 per ton—Straw, $11 to 12.

MARYLAND TOBACCO.—Fine yellow $20 a $30—good do. 13 a 18—fine spangled 16 a 20—fine red 8 a 13—good do. 5 a 7—dull do. 2½ a 3½ plenty, no demand—Seconds, 1½ a 6.

One hhd. raised by Francis X. Boarman, near Benedict, Charles county, Maryland, on old ground, sold at $20—three hhds. raised by Thomas Chaney, Anne Arundel county, near Friendship, on old ground, sold, 1 at $20—1 at $13—and 1 second at $8—One hhd. very fine, sold by Mr. Cephas Simmons for $35.

PRINCE REGENT.

This justly celebrated and well known horse, is a dark bay, full sixteen hands high, of fine form, figure, and great bone—he walks, paces, trots and canters remarkably light, and well. He is in strength, form and figure, what may be conceived in the description of a first rate English coach horse or Hunter, his eye is a large clear hazle, his movements graceful and grand, and his colts where he has stood the last three years, are much admired for their size, action and beauty.

He will stand this season, from the 1st of May, from Saturday till Wednesday morning, in each week at Govan's Town, under the direction of Mr. John Wooden; and from Wednesday till Saturday mornings, each week, at the Maryland tavern, four miles from this city, on the Frederick turnpike road, under the direction of Mr. John Wattson—at the rate of EIGHT DOLLARS the season, for each mare, and 50 cents for the groom, the money to be sent with the mares or a note given for the amount, payable on the first day of August next.

Baltimore, April 29, 1823.

N. B. Pasturage may be had at each place for mares, if required.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

WILLIAMSBURGH AGRICULTURAL SOCIETY.

At a meeting of the Williamsburgh Agricultural Society, S. C. on the second Monday in October last, the president, Capt. John James, delivered the following practical address, which was ordered, by unanimous vote of the society, to be forwarded to the American Farmer for publication.

J. DOZIER, *Cor. Sec.*

March 21*st*, 1823.

ADDRESS.

Gentlemen,

In the district of Williamsburgh where we are locally situated, the soil is like the adjacent country in many places low, flat, and broken with swamps, ponds, and what we term bays; that is, large ponds grown over with bay-trees, which at times are overflowed with water. The swamps have natural vents by creeks, so that the waters run off, if no impediments are in the way. But the ponds and bays, are shaped in the form of a basin, brimmed round the edges to hold it in, and thereby it becomes putrid and unwholesome, and destroys vegetation, unless very soon removed. Yet this soil when made dry is found to be prolific, and amply rewards the cultivator for his trouble, and expense of draining it.

These things considered, with many others that could be enumerated, would it not then be wisdom in us all particularly to attend to it, so as to lead off those poisonous waters out of our fields, and in those other places adjacent: if generally done by each person, who possesses or occupies such soil in the district, the advantage therefrom resulting to ourselves, and the community would be incalculable. In the first place, we would most assuredly enjoy better health; our fields would produce more abundantly—we would save much of the money that is spent by travelling in a certain season of the year for health, to more salubrious parts: and much of that which it now takes to pay our Doctor's bills.

To my knowledge many of you have in some measure been thus engaged, and have gotten your fields partially drained; but I have to remark that the drains I have seen generally indicate to me their incapacity to lead off the water in due time, before its bad effects are produced in the plants, which is soonest done in their young and tender state, and if injured then, I find it impracticable to restore them to their native vigor again, I therefore recommend to planters to have this business executed if possible, before the seed is sown or planted on the soil. A great deal of labour may be saved in laying out the drains to the best advantage, so as to have the least quantity of earth to remove—water itself is the best leveller and director, and if well observed, will lead on to some running stream, by which it can pass away, and the most suitable time to discover this, is when the basin is full to overflowing. Our fields cannot be said to be ready for the plough, nor to receive the seed until it is sufficiently freed from water.

Indian corn, with us, is generally the first planted crop in the spring season, and as early too, as the months of March and April, for most generally the earliest planted, produces the heartiest, and heaviest grain: but for me to attempt to give this society any thing new on the culture of that grain, after what has been so ably written by Colonel Taylor of Virginia, in his "ARATOR;" and in many numbers of the "AMERICAN FARMER," might appear to you presumptuous:—I therefore refer the inexperienced in that art, to them, as much abler guides; only with their permission, I will recommend to the inexperienced planters of the south, to make suitable allowance for the difference of seasons; ours being earlier, and requires sooner planting than theirs: our soil is generally thinner and lighter in this district than theirs, and will not admit of such deep ploughing, without greatly injuring it. In this I judge from experience.

Of the ploughs in use amongst us—I consider the most of them to be very defective as to their model, but am happy to observe we are beginning to find out their defects, and new modeling them, or purchasing the patent kind. The plough of late years, in my opinion, in this district, has been too much used in tending the crops after they are planted; we plough, and cross plough again, and again, and turn the manure that was laid on the soil at first, over and over, until its good effects become thereby destroyed by exposure to the sun and air, and suffering it to evaporate. But some planters will enquire how then are we to destroy the grass and weeds amongst it, without making great use of the plough for that purpose? I answer, that we must do it by the hoe and harrow principally.—For it is a well known fact, that a heavy clod or furrow, laid on the seed of grass, and suffered to remain there, will prevent it from germinating; but removed by frequent cross ploughing, and raised up again near the surface, it will unquestionably sprout, and grow if done in that season; then the consequence must be, that every time that it is done, it will produce more grass to be killed. In my recollection, the farmers of half a century past, ploughed their fields once in the season, and they produced more and better corn, than we do now with all our ploughing; but, man is prone to run from one extreme to the other, and this we find to be the case in the use of the plough.

Our soil if well cultivated, will produce abundantly of red, or cow peas; they are an excellent substitute for Indian corn to fatten horses, being both grain and fodder, cattle also will get very fat on them, and give much rich milk; which makes butter of an excellent flavour. The grain when scalded in boiling water, or well steeped in cold water, and given to hogs, make them good and palatable bacon for our tables; more especially with a little mixture of Indian corn, to harden their fat. A lively sandy soil is most productive, and they bear best if planted by themselves on ridges, or beds, elevated or made with the plough; but good crops have been frequently made by planting them in the field with Indian corn; by putting in a bunch of them between every two hills of corn so as they can vine up the corn stalks, which support them—some cotton planters object to having a pea and cotton crop both on hand at once to harvest; and say that time is not to be found for them. I acknowledge this might sometimes be the case, but if it should, has not the cultivator a choice which of them to choose, and which to refuse? and if the peas are left in the field, he can turn in his stock to gather them, and they will not be lost—for the vines ploughed in, will make manure to good advantage.

Sweet potatoes, our soil will produce, and they are a profitable crop to the cultivator, being a substitute for bread, and a good wholesome food for our labourers; children are uncommonly fond of them, and it is a food that agrees with them: they are good for all our domestic animals, and poultry, and also fattening; but especially for hogs—the value of this root is so great, and well known, that it might be well considered an insult on your good sense, should I attempt to advise you to continue the culture of it.

The method most generally used to prepare the soil to receive the seed, is by raising it, either by the plough or hand hoe, into round hills or ridges, to the height of about eighteen inches, upon a base of about four feet six inches square, if for hills; or if ridges are preferred by the cultivator, the same width of surface in the base, continued on in a straight line by the plough, will be sufficient to form them on; the slip, or seed, is deposited in the top, so as to be buried about an inch under the soil, that the roots may run down through the soft earth, to the hard bottom left there, where they stop descending and then thicken in their growth.—To destroy the grass, and weeds, that will arise amongst the vines in their young stage, that is before they descend to the bottom of the hills, or ridges, and to keep the soil loose for the potato to grow, I plough the earth amongst them, by turning the bar of the plough into the potatoes on the top, the share out, and slice off a part of the hill or ridge; throwing the dirt into the water furrows below, and this on each side of them, only observing to take care to leave a sufficiency of the centre untouched to support the plants, then extirpate what grass, or weeds, that may be left remaing amongst the plants, and in three or four days afterwards, when the sun has had time to warm the soil, reverse the plough, and throw back the earth that was first taken away from the hills or ridges, and dress them up again into their former shapes, and let them remain so until digging time.

The best manure for sweet potatoes that I have yet experienced, is first, cowpen; second, cotton seed, the sprout or bud of which must first be killed by steeping it in water; or lastly, unrotted straw laid or placed in the bottom of the hills or ridges; when they are first drawn up, it keeps the soil loose, and suffers the heat of the sun to penetrate, which is of great advantage.

Cotton.—Every member of this society is, or has been a cotton planter; we differ somewhat in our methods of planting, and the after cultivation of this most valuable plant; but our general plan is nearly the same. I will therefore only give the inexperienced a few hints of my own method, leaving it to their own discretion to improve thereon. In the winter season I endeavour to have the soil well broken up and pulverised, more especially if it be recently cleared of its timber, and brought into cultivation, or has been lying waste, or uncultivated, for some time previous. When the season of planting is near, I have it laid off by the plough into beds at a proper distance; that is, from three to four feet apart: which I find to be sufficiently wide, for the most of my fields; but in a strong rich mould it would be necessary to have them one or two feet wider; so that the branches when at full growth will but just meet; for if they interlock it will be injurious, or if they cannot meet, it will be a loss of space. I lay three furrows together to form the basis of my beds to sow my seed on, and I leave the remainder of the soil, if any, to be turned up afterwards to mould the plants with, and raise the beds higher, which at last will be from six to eight inches high. At planting time, split the beds, or these three furrows, laid together lengthways, with a small trenching plough, or the corner of a hand hoe, to receive the seed, by drilling it in; one bushel to an acre will be fully sufficient if the ground is loose and mellow; or if foul and full of clods, it may require two bushels or more; then cover the seed lightly with the earth, that the plough threw up in forming those trenches; use a hand rake for that purpose, taking care to remove from it all trash, or heavy clods of earth that might cover and smother the sprout. If the cultivator prefers his cotton to grow in bunches in a straight line for the plough to attend, he can checker it crossways of those three furrows, or beds, which was first laid off at any given distance he may prefer, and thereby it will be in square spaces to form flat hills: then in the centre of them, open a trench, or hole, and throw a small bunch of seed in, and cover them over with the soil. If the field has been planted in cotton the year previous, I reverse the beds, and form the new beds, on the old water furrows. When the seed has sprouted, and well risen above the ground, and grown so as to have four or five leaves on the stalks, it is then time to weed it, and lay fresh mould to its roots; soon afterwards plough up the middle spaces that were at first left between the rows of cotton, and throw an equal part of it to the row on one side, and as much on the opposite side, so as to preserve an equal distance between them; great care must be taken in this performance, that the plants be not covered with the soil thrown over by the plough. Then give the plants another dressing over with the hoes, and at every dressing add more soil to the roots, to keep it growing, unless you find it about to overgrow itself; then to check it, and make it pod, in place of adding soil to the roots, have some of what you had formerly laid on, scraped and removed from them. As soon as your plants are high enough to get hold of them with the finger, it will be time to thin them out, by leaving them single at their proper distances, by taking away the most useless ones, and leaving the most healthy to grow. The distance to leave them standing must be judged from the quality of the soil; on lean soil six inches may not be too close in the rows on which they stand; but on very rich soil, four feet or more may not be too much; the air and rays of the sun must have room to pass between the branches, or the shapes, and pods, will rot.* The safest way of thinning it to insure a good stand, is to do it at two different times; but be cautious it be not delayed too long at any of the times, or it will certainly suffer an injury. The cotton plant requires careful nursing, more particularly when young; to subdue our *crab grass*, or more properly speaking *crop grass*, from amongst it, more especially if it is at first neglected, and suffered to remain until it has passed the plant leaf, is an arduous undertaking; to accomplish this, I run my cutter plough lengthways of the rows, so near the cotton as not to injure, or bury it, the bar in, and the share out from it, and throw the soil between the rows, taking care to leave a sufficiency of soil to support the plants, to keep them from falling; then hoe, or pitch out the grass left in the cotton, then plough back the soil to it, and cover that grass, dress up the beds with the hoe, and soil the plants; but this work should be performed before the horizontal roots has extended far out, or it will impede the growth of the plants, and is to be performed as a second dressing if possible. To give a minute detail of every particular circumstance respecting the cultivation of this plant and to prepare the cotton for market, would far exceed the limits of an address; and before gentlemen of your experience I consider it unnecessary.

Gentlemen spectators: we thank you for the honour you have done us in attending this day's meeting of this society; we are a small band endeavouring to do great good to ourselves, and the community at large; that is, in promoting and advancing agriculture: which is the true interest of every nation and clime. We need, and require more assistance from you individually.—We are acquainted with, and appreciate your theoretical and practical knowledge in the business, and are aware how much it would serve us, to be aided at our board by such practical husbandmen?—Our interest in agriculture is one and the same: why not then associate and assist each other in promoting its best interests, by establishing and encouraging societies, which has been a practice in different states and kingdoms, from times immemorial, and they are in our day accumulating faster than ever in the United States of America; we wish them much success, and every individual person who devotes their time and talents to so laudable a purpose.

This agricultural society of Williamsburgh district, South Carolina, has existed nearly four years; our soil is generally thin and light, and considerably exhausted; but capable of being improved when the proper methods are taken.—This and similar purposes we profess to be the great design of this society; and the cause why we so constantly call in your assistance to help us; for we of ourselves can do but little of the much we wish to do. Therefore we solicit your help, by your counsels and your experience; and the generations to come will bless you for it.

JOHN JAMES, *President.*

Delivered 16th November, 1822.

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* *I do not mean the rot, a fatal disease that has come of late years in our cotton: but the rot produced by an obstruction of air and light.*

ON THE MANAGEMENT OF HORSES AND DOGS—BY AN EXPERIENCED SPORTSMAN.

(Continued from page 38, vol. 5.)

Of nicking Horses.

I once knew a most valuable horse killed by nicking his tail; it mortified. The surest method is to give him a dose of physic the morning before the operation is performed, and at least one dose more the third day.

Of sore backs in a Regiment of Cavalry.

All our cavalry, on service, should have a blanket, eight times doubled, under the saddle. It is of great utility; for, with care, you never will have a horse with a sore back; and, at night, the man may draw it from under the saddle, and cover himself with it; thus he will have two blankets to cover himself. But road horses, and wagon-horses too, frequently have sore backs.

A cure for sore backs.

The best method of curing sore backs, and I have frequently experienced the efficacy of it, is to DISSOLVE HALF AN OUNCE OF BLUE VITRIOL IN A PINT OF WATER, and dab the injured parts with it four or five times a day. The best captain of cavalry, I know, is not he who only fights his troop well in action; but he who has his horses in the best condition, and has the fewest sore backs in his troop. What a laudable example the German hussars, and other cavalry, shew us, in the care of their horses. The attention they pay to their horses is wonderfully meritorious.

No Horse, out in all weathers, and standing still in the streets, should be curried or brushed.

I never allow a horse of mine, which is out in all weather, and frequently stands for hours in the street, and very often in rain, to be curried, or brushed: currying and brushing thins their coats, and makes them more liable to catch cold. Nor do I ever allow them to be covered in the stable with a cloth. They are rubbed well with a whisp of straw, and then with a course hair-cloth; this makes the blood circulate, and it is fully sufficient. I am thoroughly persuaded, no cavalry horse, on service, at the picket cord, should ever be curried or brushed: indeed, a couple of curry-combs may be kept in each troop, in case a horse may have some hard dirt caked on, which cannot otherwise be rubbed off.

No horse should stand on litter in the day time.

I never allow a horse to stand on litter in the day-time in the stable. I speak not of running-horses or hunters. Provided the straw be not perfectly dry and clean, it perishes the feet.—Look to horses which stand upon half-perished litter, as one half of them do at the livery-stables; you will find their feet full of dirty, half perished litter. This materially injures the feet.

An infallible lotion for blows, bruises and sprains.

For the present, I have nearly done with the treatment of horses; but will give you one receipt more, which, *of all the medicines* in the world, is *the most efficacious.* It is as beneficial to man and woman, as it is both to horses and dogs. You should never be without a bottle of it in the house. It is infallible in its cure of all bruises, blows, and gentle strains, which horses and dogs receive in the field. I do not mean to say that it will cure a horse, which is absolutely let down in the sinews; but, in every other respect, it is a sovereign remedy. I have had, in the course of time, four or five servants who have slipped down stairs, and have terribly bruised their legs, and sprained their ancles. I have also given it to numbers who have received injuries in their limbs from falls, blows or bruises, and I never have known it to fail. It was given to me by an old huntsman, thirty years ago. It may even be used when the skin is broken, or rubbed off; not absolutely on the wound itself, because it will occasion great pain; but it may be rubbed in well all round the wound. TAKE, OF SPIRIT OF WINE, EIGHT OUNCES; DISSOLVE ONE OUNCE OF CAMPHOR FIRST, IN THE SPIRITS OF WINE, THEN ADD ONE OUNCE OF OIL OF TURPENTINE, ONE OUNCE OF SPIRIT OF SAL AMMONIAC; OIL OF ORIGANUM HALF AN OUNCE, AND ONE LARGE TABLE SPOON FULL OF LIQUID LAUDANUM. It must be well rubbed in with the hand, for *full a quarter of an hour*, every time it is used; which must be four times each day. you will be astonished at its efficacy when you try it.

With certainty how to know a strong and good eye from a weak one.

I will now inform you how for certain, you may know whether a horse has a strong and good eye, or a weak eye, and likely to go blind. People in general turn a horse's head to a bright light to examine his eyes. You can know very little, by this method, what sort of an eye the horse has, unless it be a very defective one. You must examine the eye first, when the horse stands with his head to the manger. Look carefully at the pupil of the eye in a horse; it is of an oblong form—carry the size of the pupil in your mind, then turn the horse about, bring him to a bright light, and if, in the bright light, the pupil of the eye contracts, and appears much smaller than it was in the darker light, then you may be sure the horse has a strong, good eye—but, provided the pupil remains nearly of the same size as it appeared in the darker light, the horse has a weak eye; therefore, have nothing to do with him. There are contracting and dilating muscles in the eye, which will plainly shew you, provided you follow my instructions, in what state the eye is, whether it be a strong or a weak one.

Many horses are attacked in their eyes when coming five years old. This is vulgarly called moon-blindness. It is a periodical blindness, which comes and goes, sometimes three or four times; but, if it ever comes above once, I imagine his eyes to be in great danger.

Of Worm's being in a horse's stomach.

I have often read, in farrier's works, and in those of veterinary surgeons, of worms in a horse's stomach—for my own part, I cannot credit it ; for the peristaltic motion of the stomach is so powerful, and the heat so great, when the horse is alive, that I am of opinion that worms may as well live between two mill-stones, when at work, or in a hot baker's oven, as in a horse's stomach—and this I have a right to say, that, when the motion of the stomach ceases, which it does with the life of the animal, in half a minute, worms may move from their former quarters into the stomach, particularly if the stomach be replete with food. Certain we are, that no person has ever seen the stomach of a horse when alive ; therefore I am justified in saying, that I imagine it must be conjecture, and that I give a good reason for my opinion : however, I will not assert, or be positive in an opinion which may be contrary to that of more experienced men.

Wounds in the skin of horses.

Wounds in the skin of horses will generally be cured BY LINT DIPPED IN FRIAR'S BALSAM. I have already mentioned the great benefit of nitre in inflammatory fevers. Osmer relates a story of a horse, which he asserts to be a fact :—that a horse, with the mad staggers on him, broke out of the stable at a powder-mill, and got to a cistern of water in which a large quantity of salt-petre had been dissolved. He drank plentifully of it, after which he became immediately well, without any thing else being given him. He mentions this, to shew the good effect of nitre in fevers.

If Daffy's Elixir be too expensive, give Philonium Romanum.

I have already mentioned, that A BOTTLE OF DAFFY'S ELIXIR is the best medicine I ever tried for a horse taken with the cholic, or gripes, from drinking cold water, &c. &c. But, as Daffy's Elixir is expensive, you may give him ONE OUNCE OF PHILONIUM ROMANUM—repeat the dose in one hour, if the horse be not relieved.

Two sorts of Cholic and Gripes ; how to distinguish them, and to cure both.

You must be particularly careful to distinguish, for there are two sorts of cholic, or gripes ; the one proceeds from the horse being chilled by cold water, &c. ; the other proceeds from costiveness and inflammation of the bowels. In the *latter* disorder you must be guided by feeling the horse's pulse, to ascertain whether it be attended with any degree of fever. I have told you already how to feel a horse's pulse, and how often, in a minute, a horse's pulse, free from fever, should beat. In this latter disorder, the dung must be constantly raked away, as it falls into the rectum. Give the horse sweet oil inwardly, to relax the intestines, and to supple the hard excrement, which, from dryness, may be lodged in the gut, which *is frequently the cause of this complaint.* Give him, every four hours, one ounce of the common purging salts. In this case, nitre is not to be given, as it acts mortally as a diuretic. If the horse be in considerable pain, he should be bled, and, if the pain be very violent, bleeding should be repeated, because there will be inflammation.

How to judge whether or not that you have the best Colt of the year.

I do not believe there ever was a better horse than Mr. Robert Pigott's Shark, excepting Eclipse, which was a very uncommon horse. I will tell you what Shark could do, by which you may give a tolerably good guess whether you have nearly the best horse of his year. Run five or six of your young colts together, one mile : if they all come in well together, you may be sure that not one of them is worthy to be kept in training, excepting you have one amongst them, which is an uncommonly large sized colt, large limbed and loose made. It is possible that, when he comes to his strength, and fills up, he may turn out a good horse. If you have one colt, which, in the trial, runs clear away from all the rest, you may expect that he will turn out a good runner. Take him, about a fortnight after, run him with two of the others which were the two first of those beaten ; for you must not run him with the worst or last of the lot. Let him give them both twenty-one pounds. If he does not beat them cleverly, you have no right to expect that he is the best, or nearly the best horse of his year.

(To be continued.)

BALANCE OF TRADE.

The subject of the following essay, is one of such very general concern, and yet one which has been so *mystified*, by writers on political economy, that we concluded on reading it, that our friends, plain farmers, would be pleased to see a matter generally considered so abstruse, thus simplified and brought home to every one's understanding—with essays like these, we apprehend we may diversify the columns of the Farmer occasionally, without any dereliction of promise or duty. Farmer's sons may read them to advantage, gaining thereby a knowledge of elementary principles of importance, applicable to the operations and dealings of neighbours and of nations. If, however, our impression in this respect be not well founded, we shall regret the indulgence of it, and only wish that we had some way of taking the vote of our numerous and generous patrons, whose will ought to be our law.—*Edit. Am. Far.*

FROM THE PORTSMOUTH JOURNAL.

In the science of political economy, there are no errors so inveterate, as those relating to foreign commerce. It is but a few years, since it was the fashion to regard the books of the custom-house as the only standard by which the prosperity of the nation could be measured. If the imports exceeded the exports, it was said that the balance of trade was against us; that we were running in debt to foreign nations ; and that poverty and ruin were overtaking us. As the balance of trade, in this sense, has always been against the United States, it would seem to be difficult to reconcile our acknowledged prosperity with the correctness of the principle. But though better opinions begin to prevail, they are not universally received. We still hear predictions of ruin, because our imports are greater than our exports. It may be worth while to examine the reasons for this apprehension.

In the case of an individual, nothing can be plainer than that his *imports* should exceed his *exports.* How can a man become rich, but by receiving more than he parts with ? It is the same with a nation. If the United States, by exporting sixty millions annually, can import sixty-four millions, it is apparent that nearly the whole difference has been profit.

The error has arisen from estimating the value both of imports and exports at our own custom house, instead of estimating their value in the foreign country where the exchange is actually made. An inquirer learns at the custom house that sixty-four millions have been received, and that only sixty miilions have been sent to pay for it ; and he naturally asks how the difference is to be supplied. If he is not acquainted with the course of trade, he naturally supposes that a debt of four millions has been incurred ; and he shudders at the thought of having all the gold and silver drawn from the United States to pay it. Yet a slight attention to the course of domestic trade would shew him that his apprehensions were groundless. In some of our distant settlements corn is fifty cents a bushel, and salt is one hundred. If a Farmer from one of these settlements were to come to market with thirty bushels of corn, he might sell it for sufficient to purchase thirty-seven bushels of salt. If the value of these articles is to be estimated at his own door, he has exported fifteen dollars, and imported thirty-seven dollars. But unless the expenses of his journey have exceeded twenty-two dollars, he has made a profit by the exchange.—Now the Custom-House returns give just as correct a view of the trade of the nation, as an account kept at a Farmer's door of his out-goings, and in-comings, would give of the state of his business. These returns are valuable and necessary—but for a very different purpose.

The great fallacy of arguments drawn from the custom-house returns, will be apparent from considering only one branch of the trade of this town, namely the freighting business. In the course of the last year, we have had twenty-seven Ships and twelve Brigs employed in this trade ; several of which have made two voyages. It will therefore be perfectly within the truth, to make a calculation upon forty voyages in the year. These vessels generally took with them hay and lumber sufficient to pay their port charges in the Southern States, say $1000 each, or $40,000 for the year. They receive upon an average £1000 sterling each, in Europe ; or $177,600. Deducting from this sum, their port charges in Europe, there are brought home in salt and iron, or left behind to be brought home by others $150,000. The whole of this sum appears on the books of the custom-house as *imports*, without one cent of *exports* to balance it.—But as from this sum, the Merchant keeps his ship in repair, pays his seamen, and purchases the outfits of the voyage, it consists of interest and reimbursement of capital, wages of labour, and profit in the same manner as the price, which the Manufacturer receives for a piece of Broad cloth, consists of interest and reimbursement of capital, wages of labour, and profit.

A merchant sending his ship to sea, must charge against his voyage not only the first cost of his cargo, but all the outfits, provisions, and wages advanced to the seamen : his own or agents services, and the premiums of insurance. On the return of the vessel, he must again charge the adventure with the seamen's wages, and all the expenses attending the landing and sale of the goods. In order to know then whether the balance of trade is for or against the Country, the imports of the merchant must be placed against all these charges, and if it exceed the aggregate amount we may conclude that his business can be continued with profit to himself and benefit to the country. The exports of this part of the country are bulky and of small value ; in many cases not constituting one half the consideration that produces the imports—yet this is all that appears on the books of the Custom-House.

Another error, still more inveterate, is the opinion that the exportation of specie is injurious to the country. Almost the whole of our specie currency is Spanish coin,—We received it in foreign ports in exchange for the products of our labour. It was received and brought home, because it was more advantageous at the time to receive it, than to barter our merchandise for that of the foreign country. We export it for the same reason ; because it is more advantageous at the time, to make our purchases with it, than to send merchandise to be bartered. Apply the principle once more to an individual. He becomes richer or poorer, by the terms of the contracts he makes, and not by the mere fact of bartering, or of buying and selling for money. If he sells to A for money, and employs that money to purchase of B, he is not necessarily poorer than if he exchanged his merchandise, at once, with B. If it would be profitable to the United States to export the products of agricultural industry—grain, provisions and lumber—to the East Indies and China, and then to exchange them for sugars and teas, it does not necessarily follow that the trade is ruinous, because the merchandise is sent to the West Indies, there exchanged for dollars, and the dollars are afterwards sent to China. The only difference is the expense of the intermediate voyage, which may, or may not be repaid by the profit of the first adventure, or by that of the final shipment.

Principles are best tried by familiar examples. A Hatter, who pays his Shoemaker with money, is an *exporter* of specie. He must previously have *imported* it by the sale of hats. Whether he gains or loses by the mode of payment, depends upon the fact of his getting better shoes or not, by paying in money, instead of paying in hats. If he gains by purchasing with money, he will generally be anxious to sell for money, that he may employ it in his purchases. That is, he will import specie, that he may afterwards export it. The case is precisely the same with a nation. If money is not exported, it is perfectly certain, it will not be imported. In this, as in every thing else, it is the demand that produces the supply.

Again,—the quantity of money in a country is no certain mark of its prosperity.—We do not estimate the wealth of an individual, by the number of silver dollars actually in his pocket, but by the command he possesses over the products of labour. In like manner the wealth of a nation does not consist in its circulating medium, but in that, which the circulating medium represents—the products of labour. If all the precious metals in England were at once destroyed, she would still be a wealthy nation; for she would still possess her fertile soil, her roads and canals and bridges, her buildings and manufactories, her ships and merchandise. So far from the quantity of money being the standard of wealth, it is found that money is always scarce in enterprising and thriving communities when it can be profitably employed; and is always plenty, when from any cause, it will not pay the usual rate of interest.

We should feel almost ashamed of stating anew and defending such plain principles, if every week did not bring us papers, in which they are misunderstood or perverted.

NEWS FOR THE LADIES.

French Female Parliament—Paris, Nov. 20, 1822.

Chamber of Peeresses.— A committee of the whole chamber sat, for the purpose of taking into consideration the necessary steps for re-establishing female conjugal authority in its pristine form.

Madame la duchesse Haute Voix drew a very eloquent picture of the degeneracy of husbands in these times, and the wanton infringements which they were daily making upon the conjugal prerogatives of wives. "She would not," she said, "take up the time of the chamber by insisting upon the necessity there was to take immediate steps for arresting the progress of this evil, because she was sure that every one of the noble members would agree with her, that there was no time to lose in suppressing an abuse of such magnitude. The only question was, what measures ought to be adopted? whether the chamber would think it most expedient for wives to act in an amicable or in a warlike manner? that is to say, to try the effect of flattery and insinuation on their domestic tyrants, or at once to assert their rights, and set the usurped authority of their husbands at open defiance? For her part, she was, after much consideration, of opinion that this last measure would be the most efficient, as she trusted she should satisfactorily prove from the documents she held in her hand."

The noble lady then read several petitions, the substance of which was as follows: that, upon diligent enquiry in all parts of the kingdom of France, it appears that the spirit of matrimonial insubordination has spread very much during the last eight years; that owing, as it is supposed, in a great measure, to the intercourse France has had with England, the married men in the former country have in general imbibed the false and dangerous opinion, that a husband has actually and *bona fide* a right to be master in his own house; and in consequence the authority of wives has been circumscribed in several points, upon which, till the above-mentioned period of time, it was always undisputed. Several instances of this were given in the different petitions which the *duchesse* read, and from which we select the most prominent.

The marquise de —— had been compelled by her arbitrary husband to wear her gown half an inch higher in the bosom than the precise height fixed by the fashion. (Cries of 'too bad!' 'shameful indeed!' from several members.) Monsieur de T——, on finding that his wife had broken her solemn promise made to him when he last paid her debts of honour, never to game again, had hurried her down to his country seat, where she had now remained three months in durance, and without hope of liberation. (Exclamations of 'shocking!' 'insupportable!' from the majority of the members.) Madame de C—— had been forced to diminish the expenses of her toilet during the last year nearly one half. (Violent murmurs of indignation.) "Yes, ladies," continued the *duchesse* energetically, "you may well murmur—these are grievances; but what will you say to the one I am now about to state? an atrocious act of tyranny hitherto unexampled in French annals. Monsieur L—— took it into his head to be jealous, without the least reason, of his wife's most intimate friend, comte ——, and positively forbade her to receive any more visits from that gentleman. It chanced that he returned home suddenly, at a time when she supposed he was in the country, and found her *tete-a-tete* with the *comte*—and notwithstanding she condescended to declare that it was by mere accident he had been let in, Monsieur L—— had the audacity to express himself in terms of the highest indignation, and even to threaten a separation." (At these words the members seemed absolutely electrified.) "Yes ladies," continued the *duchesse*—"you may well be mute with horror and astonishment; this is, indeed, an outrage, of which, in former times, no French husband would have dared to be guilty: but such is the consequence of innovation. We have, by weak concessions, been ourselves the cause of these disorders; and it is only by vigorous measures, and a determined assertion of our rights, that we can replace things upon their ancient footing.

Madame la comtesse Tres-Doucement begged leave to differ from the noble *duchesse*—she was certain that coercive measures would only precipitate the downfal of female authority, which she thought, by good policy, might still be preserved. The question was, which was most desirable, the reality, or the reputation of power? (Several voices, 'the reality, to be sure.') "If this is your opinion, ladies, I think I can convince you that mild methods are most likely to procure it."

The noble speaker then entered on the subject at great length, and in a very able manner. She quoted several examples, to prove that smiles, tears and caresses were the natural weapons of women; and who, she asked, could wield these weapons with more certain effect than French women, whom nature had gifted with the most seducing powers of persuasion? It had been asserted that this spirit of innovation was fostered by intercourse with the English. This assertion was perfectly false: she was no partizan of the English; on the contrary, she regarded them as natural enemies; but she could not refuse justice even to an enemy. She had been in England, had seen much of society there, and she could assure the chamber, that there was no country in Europe in which the wives exercise a more despotic sway. It is true, there is a certain restiveness of character, if she might so express it, in the men, which prompted them, occasionally, to oppose the measures of their wives, merely and solely that they might enjoy the reputation of being masters: but this opposition was a mere gasconade, which never went further than words, and was rarely to be found but among the little gentry of the provinces. The nature of it has been happily described by one of their poets in the following lines:—

> "The surly 'squire at noon resolves to rule;
> And half the day, zounds! madam is a fool:
> O'ercome at night, the vanquish'd victor says,
> 'Ah! Kate, you women have such coaxing ways!'"

If, then, English women, in spite of their native pride and timidity, can by their blandishments subjugate their husbands, what may not Frenchwomen hope to effect?" The noble speaker then sat down amidst great applause.

Madame la marquise le Sage, thought that neither of the noble members had looked at the matter in all its various bearings. The evil was, in fact, of so complicated a nature, that it was not possible to apply a general remedy: for if forcible measures might be improper in some cases, lenient ones would in others be equally so; and she had many reasons to believe, that there were circumstances under which a mixture of both might be necessary.

After considerable discussion, the business was referred to a private committee of twelve experienced matrons, who were appointed to investigate the various petitions presented to the chamber, and to draw up a matrimonial code, by which provision should be made for all possible difficulties which wives might have to encounter in the government of refractory husbands.

Madame la vicomtesse du Fard, begged leave to call the attention of the chamber to the necessity of bestowing some mark of approbation on a person who, though in an humble rank of life, had shown that he knew how to support the character which the French have always maintained for politeness. "This person," continued the *vicomtesse*, "is Monsieur Cosmetique, a perfumer, who, with a delicacy worthy of imitation, offers his renovating bloom to ladies who fancy themselves troubled with wrinkles. Observe with what delicacy the word *fancy* is introduced!" (A burst of laughter from some of the juvenile members.) "Ladies may laugh, but I maintain that an affair of this kind is no joking matter. We all know that age is not the only enemy to female charms: hot rooms, the vigils of the card-table, and other causes, may accelerate their decline; but what woman of delicate feelings could bear the thought of applying to a coarse tradesman, who should inform the public, that he had invented a wash to take away wrinkles? It is only by looking at the matter in this point of view, that we can estimate the exquisitely beautiful mixture of sentiment and politeness observable in the advertisement of Monsieur Cosmetique, for which I move that he be rewarded by a vote of thanks from the chamber."

After a short debate, the motion was carried by a considerable majority, and the sitting closed at three o'clock.

TRIBUTE TO MERIT.

Translation of a letter from Monsieur de Dombelle, President of the Central Agricultural Society of Nancy, to the Right. Hon. Sir John Sinclair, Bart. dated Nancy, 7th November 1821.

"Sir,—I have the honour to inform you, that on the 3d of this month, the Central Society of Agriculture of Nancy, has inscribed your name on the list of its Foreign Correspondents. The Diploma shall be transmitted to you without delay. I hope that you will not refuse the lustre which your name would procure it, to a Society now in its infancy

"I beg leave here to express, all the satisfaction which I experience, in a choice so honourable to the Society; and to add, how much I am personally flattered, with the sort of brotherhood, which this gives me, with the person, whom I consider to be the first agriculturist in Europe.

"I have been occupied, Sir, for some time, in translating your excellent "*Code of Agriculture.*" If any thing can contribute to raise Agriculture in France, to the rank of a science, which we could not till now pretend to do, it will certainly be the publication of this work in French, being the most systematic, the most concise, and, in my opinion, the most perfect, which has hitherto been written in any language.

"In the course of this work, which is already well advanced, I have perceived more than once, that I should require information, respecting some particulars. If you would have the extreme kindness, to permit me to apply to you, to obtain such information, it would be a motive for gratitude, which I would well know how to value; and in which all the French Agriculturists, who know how to appreciate your useful lessons, would participate with me.

"I have already met with some words of which I do not well know the meaning; for instance, I do not know what is the insect called *wire worm.* I have not been able to ascertain it, nor even to approximate what it can be, as it does not extend its ravages with us, to grain sown on clover, when ploughed up, as is the case in England. I do not know either, what is the plant called "*rib-grass,*" of which I have not yet seen the botanical name given. Perhaps, indeed, it may have escaped me while reading, and I may find it out in the continuation of the translation.

"This work, to which, notwithstanding its impertance, I am only able to devote a short time every day, will still require three or four months; but I hope it will be published about that time.

I beg that you will accept the expression of the respectful sentiments, with which I have the honour to be,

Sir,
Your very humble and obedient servant,
(Signed) Matthieu de Dombelle *ainé.*"

A NEW ARTICLE OF EXPORT.

We know the fact, that Mr. H. Traphagen, a respectable farmer at Horsimus, N. Jersey, near the city of Jersey, raised last summer about 20,000 heads of Cabbage for the New York market; but he was unable to dispose of more than one half of them in the fall from his wagons—The other half of this valuable vegetable he made into *Sour Krout*, which he now sells at from 8 to 10 dollars a barrel for exportation to India &c. On Saturday we saw a wagon load of barrels of Krout going on ship board.—*N. Y. Gaz.*

FROM THE FARMERS' JOURNAL.

Sir—

You probably know that farmers are in the habit of Manuring land by the eye, and in that way are liable to mistakes—I have found, in the Complete Grazier, a valuable table, and presuming the calculation to be accurate, I think its publication may be very useful.

I remain, your's, &c.

East Greenwich, March 27.

The following table for manuring land is extracted from an English work entitled the Complete Grazier:—

	No. of loads per acre.							
No. of heaps to load.	1	2	3	4	5	6	7	8
At 5 yards distance.	193	96	64	48	38	32	27	24
At 5½ do. dō.	160	80	53	40	32	26	23	20
At 6 do. do.	134	67	44	33	26	22	19	16
At 6½ do. do.	114	57	38	28	22	19	16	14
At 7 do. do.	98	49	32	24	19	16	14	12
At 7½ do. do.	86	43	28	21	17	14	12	10
At 8 do. do.	75	37	25	18	15	12	10	9

Explanation of the first two rows of figures in the preceding table.

The number of heaps, consisting of one load each, laid at five yards distance, is 193 to cover one acre; at two heaps to a load 96; at three heaps, 64; at four heaps, 48; and so to the end—each of the following rows is to be read in a similar manner.

FROM THE REPORTER.

HEMP.

The sample of hemp accompanying the following letter, can be seen at our office. It has been examined by a competent judge who does not hesitate to pronounce it equal to the best Russia. The thanks of the public are due to the worthy gentleman, for communicating a fact of so much importance, which he has fully established by repeated experiments.

Springhill, February 8, 1823.

Dear Sir,

I send you for the inspection of the farmers of Fayette and the adjoining counties, a sample of hemp, the produce of my farm. The only difference in the management of it from the ordinary mode, is in *ricking* it away, and letting it remain a year. The parcel from which this sample was taken, was laid down the middle of November and taken up the last of January. You will observe it has a red tinge, which was produced by spreading it too thick, and the wet warm weather mildewed it. It is however of such a quality that I have no hesitation in saying, that if all growers of hemp in the western country would join and raise such, we should soon banish the Russian hemp from our ports. I observe a writer in Niles' Register of the 25th ultimo, estimates the importation to the U. States from Russia in 1821 as follows: Duck and Sheeting $818,850, Cordage $28,281, Hemp $441,114. Our exports in the same year of domestic articles, to Russia, amounted to $127,939, composed of Oak bark, Rice, Cotton, Hops, Spirits, &c. leaving a balance of $1,160,306 against the United States. This writer very justly observes "that if those articles now exported from Russia were made at homo, then there would be an additional market for at least $1,160,306 more of domestic materials, labour and subsistence, which are now useless, unemployed and unsaleable. It would give a new aspect to Kentucky and Missouri, if these states could supply the hemp, cordage and duck which we buy from Russia. This sum distributed among the farmers, ropemakers and weavers, of the west, would indeed cause the wilderness to blossom like the rose. Yet for the sake of the paltry revenue derived from those articles, the country is deprived of the profits of raising, manufacturing, and distributing such articles." But can or ought we to ask those favours of the United States, until we first produce the hemp of a quality suitable? That can only be done by water rotting or preserving it a year. The latter is in the power of every grower of hemp, and certainly much the largest number of them can by an exertion lay one year out of the proceeds of their hemp, when the quality will be so much improved, and the price greatly enhanced. The sample sent is inferior to any of several experiments I have known made, and there are many farmers in the country who can testify to the uniform result. Your friend and humble servant,

NATH'L. HART

We feel under an obligation to our friendly correspondent, for the opportunity he has afforded us of giving such early publicity to the interesting event noticed below.

[*Harper's Ferry Free Press.*

TOTAL ECLIPSE OF THE SUN.

On the 27th of June, 1824, at 34 minutes past 4 o'clock in the afternoon, will end the present Chaldean period, and leave us for the space of two hours and fifty minutes in sublime and pleasing astonishment, as night will be realized and the stars visible, if our atmosphere should be free from clouds. The writer of this article has undertaken the agreeable task of making calculations relative to the different phases and aspects of this great Eclipse: they are made for the meredian of Harper's Ferry, in latitude 39 deg. 29 min. N. longitude 77 deg. 5 min. W. of Greenwich, and are as follows:

Beginning of the eclipse,	4 h.	34 m. afternoon.
Total darkness,	5	56
End,	7	24
Duration,	2	50

The return of this Phenomenon being variable in consequence of the retrocession of the lunar nodes, which is 19 degrees and 20 minutes every year. By means of this variation, it is seldom seen in any country more than twice in an age.—It will not be visible in Europe, but will to the American continents, and part of the Atlantic and Indian Oceans.

In this instance of Eclipse, the Moon's inhabitants on the side next the Earth (if any such there be) will see her shadow like a dark spot, travelling over the Earth's surface about twice as fast as her equatorial part moves from West to East, for the space of about five thousand miles, the breadth varying according to the Sun's obliquity.

P. S. Since the above was written, the calculation has been pursued, and the following results obtained:

The next total eclipse will occur on the 9th of July, 1842, at 16 minutes 44 seconds past 11 in the morning. It will be invisible to us, of course.

The succeeding total eclipse, however, will be visible in the United States, and will happen on the 20th day of July, 1860, at 59 minutes 28 seconds past 7 o'clock in the forenoon.

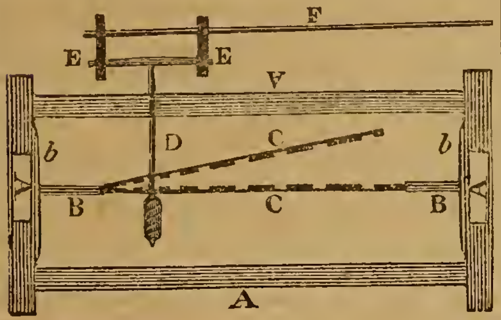
Washington Co. Md. March 17, 1823.

SPORTS OF THE TURF.

The races to be held in May over the Union Course, Long Island, promise more sport than has ever before been offered on a similar occasion in any part of this country. They commence on Monday, the 26th, when a sweepstakes will be run for, by five or six three year old colts, among which are, a full sister to Eclipse, a full brother to Sir Walter, and other high bred colts. On Tuesday, the great match race will take place between Eclipse and the horse that may be pro duced by the Virginia sportsmen, for 20,000 dollars. On Wednesday, the first day's purse, for 1000 dollars, will be run for, and among the horses to contend for it "Cock of the Rock." the brother to Eclipse, and second (as is here thought,) only to him in speed and bottom, is already on the ground.—The second day's purse is for 600 and the third for $300. We understand that the Virginia sportsmen who accepted the challenge of Eclipse, have a stable of six of the best southern horses to bring on, and from Maryland, Pennsylvania, and New Jersey, several fine horses are to be produced.—The number of superior animals that will be on the ground, leaves no question that the competition between them will afford more gratification thar. the sportsmen of this country have yet enjoyed.

N. Y. American.

A DRAWING OF A MACHINE FOR BORING POSTS, WITH EXPLANATIONS OF ITS DIFFERENT PARTS.



A. A. A. A. is a frame made of oak timber 6 inches by 3, tenanted together, the long pieces 5 feet in length, and the short 2 feet, with snatch-box notches in the centre to wedge the posts before boring, as at A A. B B. are two upright pieces of timber 2½ inches square and of different length to clear the spire of the auger D when fixed in its conductors C C, to be tenanted in the pieces b b of 2½ inches square, and long enough to travel over the centre of the notches at A A in the short space of the frame, so as to keep the upright pieces B B perpendicular.

C C are two pieces of inch plank 2½ inches wide, of suitable length to extend across the frame lengthwise, with notches to correspond with the size of the shank of the auger D, and at such distances apart as the holes intended to be bored in the posts require; the straight piece C to be nailed on the upper ends of the pieces B B, the other piece C with corresponding notches to be kept loose, except when the auger is fixed for boring, and then it is placed upon the upper part of the nailed piece C and confined by bars or nails that may be taken out and put in with the fingers, at each end of the nailed piece, which fixing is done in an instant. The pieces thus fixed form an unerring conductor to the auger which cannot deviate from its course in turning,

D is a large auger 2½ inches, fixed to turn with a lever, which makes the labour of turning so easy that children of 5 or 6 years old can work it, and consider it as an amusing play for them. I have had all my posts bored this winter by two small boys 6 years old, one of them my own son. The auger for this mode of boring, is fixed in the following manner, take two pieces of timber not liable to crack or split, 9 inches long, 4 inches by 2 in width, bore holes with an auger 1½ inch, the widest way of each piece so as to clear 1½ inch from one end of each, with the large auger intended to bore the posts, bore holes the same distance from the other end of each piece. These pieces then are to be fixed on the handle of the auger at each end by the small holes, not as represented in the drawing at E E, this being above the handle, the only way to be done on paper, but horizontally on one side of the handle. Thus fixed, the lever F which is a common pole, is put through the large holes of the pieces E E, and the auger turned with great facility by holding the other end of the pole in one hand and walking around the frame. This way of boring I perform altogether by children. But there is another way more expeditious but with an equal saving of labour, to be done by an able hand with a short lever about 4 feet long. In this case the borer stands in the same place on one side of the frame, and turns the auger with the short lever with as much ease as he could bore with any other auger in the usual way.

I am Sir your's with great respect,
JAMES RINGGOLD.

ROCK HALL, 8th March, 1823.

Editorial Correspondence.

DRAINING MARSH LAND—RICE, POTATOES, &c.

Poplar Grove, S. C.
13 *miles from Charleston.*

DEAR SIR,

I am still at the plantation, enjoying the liberal hospitality of your excellent friend Charles Elliott Rowand, Esq. where I have been for the last seven days: I find him so very generous that he will not even suffer me to speak to him in any terms of acknowledgment—To an honest mind, such attentions ought to be, as they are, a pain—because there is no probability of my ever being able to return them.

I wish you could be here to take a view of the beautiful Cherokee hedge fence, extending eight or ten miles around Poplar Grove plantation:—The description which you have published in the American Farmer of this "*non descript*," is certainly a modest one. When nature is in her desolation, we are here presented with the lively and cheerful prospect of a gay and beautiful garden, flourishing even in the rigour of winter.

Mr. Rowand is, unquestionably, and he has the reputation, of being one of the best Planters in South Carolina. He is now about 51 years of age —is the descendant of a Scotsman—has two plantations—the one where I now am, consists of 1000 acres, 500 of which is cultivated in rice—100 in corn and potatoes—all the rice, corn and potato land is *reclaimed marsh*, situated on Stone River, and which yields him immense crops. His method of draining land originated with himself—the particulars of which he has published in the American Farmer, and a model of his trunk, gate, &c. was also communicated.*

The trunk used by Mr. Rowand, without deviation, has been found to answer every possible service for the last thirty years—and one is now in operation flooding his rice-fields to-day, which was put in the ground in March, 1795.—I am persuaded that the publication of a drawing from the model which he sent you, with a few lines of explanation which can be made from his communication, would be very useful information to all future reclaimers of marsh land.

Mr. Rowand is amongst the most zealous friends to Agricultural improvement in this country—some part of every day is devoted to strangers in answering enquiries which are made of him. I enclose you a list of names of persons to whom he has gratuitously sent boxes of the Rose Cuttings. It will give you an idea of the public spirit, the disinterestedness—the genuine *amor patriæ* which actuates such men†—and will show how much may be done by a single individual, acting under such dispositions. Several boxes of different roots are now waiting the return of his boat from Charleston, to be sent to different parts of the United States.

Your's respectfully,
WM. F. REDDING.

The above extract is from a private letter on business, and was not intended for publication—but it seemed a fit occasion to make publick acknowledgment of Mr. Rowand's liberality and useful services to the good cause, and to congratulate the publick on the increasing prevalence of a disposition amongst farmers, for the interchange of good offices in this way.

Edit. Am. Far.

† The list gives the names of fifty-one of the most eminent citizens and practical agriculturists in the states of Maryland, Massachusetts, Virginia, the Carolinas, Pennsylvania, Georgia, Delaware, Louisiana, and that of Lemuel Taylor, Esq. Matanzas, and Sir John Sinclair, Scotland.

Edit. Am. Far.

AGRICULTURAL PROSPECTS.

Extract to the Editor from Frederick County, Virginia, April 23, 1823.

It is with pleasure I inform you that our crops of small grain are unusually fine, and promise an abundant harvest. They are much superior to any crop since 1819, and with the exception of that memorable year, I think I have never seen them better.

TO THE EDITOR OF THE AMERICAN FARMER.

Poolsville, Md, May 2d, 1823.

"The crops of wheat and rye in this section of country and opposite this, in the limestone lands in Virginia, have a pleasing appearance, and the present scarcity of grain, together with rye straw *is great*—as great a scarcity was never witnessed by the oldest settler among us. The crops may be pitched, and great crops aimed at, if they should get through, but it will be (in the general phrase) a tight rub.

Corn and rye is selling in Virginia, at one dollar per bushel. Grass seems to put up slowly, and vegetation has been much checked by the very severe frost of Friday morning 25th ultimo."

With respect.
THOMAS WHEELER.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco Inspected at and delivered from Lower Marlboro' Inspection Warehouse in Calvert county during the quarter commencing on the first day of January, eighteen hundred and twenty-three, and ending on the first of April, eighteen hundred and twenty three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	46			46
Number delivered.	25			25

JAMES W. LAWRENCE, Inspector.

TREASURY OFFICE, ANNAPOLIS, April 28, 1823.

True Copy from the original report on file in this office. B. HARWOOD, Tr. W. S. Md.

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* And loaned by the Editor to some good friend who never returned it.

HORTICULTURAL SOCIETY.

The inspecting committee of this society, will meet on Tuesday evening the 6th inst. at Mr. Brantingham's Tavern, in Broadway near Art-street at 6 o'clock P. M. to receive all such vegetables, flowers, and fruit, as may be brought for prize competition, and will continue to meet there every Tuesday evening (except on the last Tuesday in each month, being the regular monthly meetings at Broadway House) until further notice.

COMMITTEE.

Martin Hoffman,
William Curr,
Thomas Hogg,
Peter Hattrick,
John R. Murray,
John McNab,
James McBrair,
James Dick,

From the specimens of skill already exhibited, a very handsome display is expected on Tuesday evening, particularly of choice Spring flowers.—The early cucumbers produced before the society on the 29th of April, raised by Mr. William Wilson of this city, and Mr. Arril, in the gardens of S. Van Renselaer, Esq. of Albany, do these gentlemen much credit. Mr. Arril's cucumber was 10 inches in length, and 8 inches in circumference, and in as fine perfection as could be raised in the middle of summer. The bunches of sea kail, by Mr. Floy, will probably be the means of introducing into general culture, this choice vegetable so much extolled in Europe; it seems to suit this climate well, and the cultivation is very simple.—*N. Y. paper.*

LITERARY.

Proposals, for publishing by subscription, A COLLECTION OF FUGITIVE POEMS, moral, sentimental and satirical—by Selleck Osborn.

The author of the articles which are to compose this volume, never wrote with a view to fame or profit; he merely obeyed the impulse of the moment. Of those which were sent to the press he seldom retained copies, and they were usually forgotten by him, until recalled to his mind by the public prints, which have often gratified him by flattering notice, but have also frequently annoyed him by mutilations which were extremely mortifying. This last circumstance (besides private solicitations and other motives,) has induced him to collect, with considerable pains, his scattered effusions, and to add some unpublished pieces; which, altogether, will at least have the merit of being genuine—and perhaps that of inculcating, to the best of the author's capacity, good principles and amiable sentiments—excluding all matters relative to party politics.

Disinterestedness is not pretended: It is confessed that a liberal patronage would be very acceptable, on various accounts. The author confides in the tried zeal of his friends throughout the Union, for the promotion of his interest in this case.

The volume will be neatly printed in a duodecimo form, of 200 pages, on handsome paper, with type entirely new, and well bound in boards, at $1, payable on delivery. A commission of twelve per cent. will be allowed to agents on all returns made.

Gentlemen holding subscription papers, will please return them by the first of June next, or as soon as reasonable efforts have been made to obtain subscribers.

All communications to be addressed to the author, at Merchants' Hall, Boston, Mass.

Boston, March 24, 1823.

A subscription paper may be seen in the office of the American Farmer, and the editor of this paper will be happy to receive the names of gentlemen who may be disposed to subscribe—believing, as he does, that patronage would be, in this case, well and judiciously bestowed, in reference both to the poems and their amiable and benevolent-hearted author.

BIOGRAPHICAL DICTIONARY:

By T. J. ROGERS, ESQ.

This work, commemorative of the actions and virtues of the heroes and statesmen of the American revolution is likely to receive a very extensive patronage, and to be enriched by biographies from the pens of some of the most learned and eminent men in the country. We have observed with great pleasure the names of several distinguished living Americans on the subscription list, and have seen one or two letters from others of equal distinction, enclosing biographical sketches to the Editor of the work.

GEOGRAPHICAL.

To the Editors of the National Intelligencer.

GENTLEMEN: It is probable that the late session of Congress has terminated without any definitive measures in relation to firm and permanent establishments on the coast of the Pacific Ocean.

As a good map of the country, from that ocean to our present Western States and Territories, would tend greatly to enlighten the public mind, now awakened to that quarter, I subjoin the south western boundary of the United States, with those of Louisiana and Arkanzaw.

The latitude of the northwest point of the Lake of the Woods has been ascertained, by a British Engineer, to be 49 degrees, 27 minutes. This gives 7 degrees, 27 minutes from the south boundary on the Pacific to the parallel of the north west point of the Lake of the Woods. These make a meridian line of the length of 517 miles, and 77 hundredths; of which the half will be about 259 miles. If this be assumed for the length of the east and west sides, and 300 miles, as before proposed, for the north and south, they would give a double tier of Territories and States containing each about 77,700 square miles, with the exception of those on the coast.

However it may, eventually, be necessary to control the boundaries of States by mountains and rivers, the country is, at present, too imperfectly known for that purpose.

A. B. WOODWARD.

City of Detroit, March 13, 1823.

CHESAPEAKE AND DELAWARE CANAL.

The subscriptions for this important undertaking proceed with a degree of success equal to the most sanguine expectations. The amount subscribed within the last eight or nine days is above $80,000. The Schuylkill bank yesterday subscribed $10,000, and the Hand-in-Hand Insurance Company $5,000. The subscriptions in one block of buildings in Chesnut ward amount to $5,800.—*American Sentinel.*

* * *

The following remarkable instance of the sagacity of a Dog is copied from the Canadian Times of April 11, printed at Montreal:

"On Saturday, 29th ult. Mr. Dunn, formerly of this city, in attempting to go from Lapraire to his mills, a few miles distance, on the ice of the St. Lawrence, the horse and sleigh sunk through the surface, and the former immediately disappeared. By his struggling in the water the horse became disengaged from the sleigh, which floated—by this, Mr. Dunn, who had fallen through the ice when he sprung from it, supported himself for some time. During his stay in this perilous situation, a strange dog who had seen the accident, came from the shore and endeavoured to rescue him from drowning, by laying hold of the collar of his coat, and using violent exertions to drag him to the shore. So great were the exertions of this noble animal, that he very nearly shared a fate from which he was endeavouring to save a human being. While the dog was exercising, by influence of instinct, a degree of generosity that is often found wanting in many of our race, Mr. Wood of St. Johns, succeeded in reaching to Mr. Dunn a pole, by which, after considerable exertion the latter was rescued from his dangerous situation. The above facts were related to us by a person who had them from one of the parties concerned."

SAILING CARRIAGES.

A machine, invented by a gentleman of Christ College, Cambridge, was lately tried at New Market. In shape, it is nearly that of an isosceles triangle, and it moves with the broad end forward, on four wheels. It has a boom thirty-two feet long, and an exceeding high mast. It will carry twelve persons at the rate of thirty miles an hour. To the axle of the hinder wheels is fixed a rudder. It can go on a wind, and tack as a vessel at sea, and is capable of being so correctly guided, that the pilot, at pleasure, can run the wheels over a stone.—*London Mag.*

* * *

The King of England has presented to the nation the Library of his father. The following is his letter to Lord Liverpool, announcing the donation. The trustees of the British Museum are to have the disposition of his Majesty's gift.

Dear Lord Liverpool—The King, my late revered and excellent father, having formed, during a long series of years, a most valuable and extensive library, consisting of about one hundred and twenty thousand volumes, I have resolved to present this collection to the British Nation.

Whilst I have the satisfaction, by this means of advancing the literature of my country, I also feel that I am paying a just tribute to the memory of a parent, whose life was adorned with every public and private virtue.

I desire to add, that I have great pleasure, my lord, in making this communication through you. Believe me, with great regard, your sincere friend.

(Signed) G. R.

Pavilion, Brighton, Jan. 15, 1823.

The Earl of Liverpool, K. G. &c.

EPITAPHS.

At Ockham, in Surrey, 1736.

The Lord saw good, I was lopping off wood,
And down fell from the tree;
I met with a check, and I broke my neck,
And so death lopp'd off me.

At Selby, in Yorkshire.

Here lies the body of poor Frank Row,
Parish clerk and gravestone cutter;
And this is writ to let you know,
What Frank for others used to do,
Is now for Frank done by another.

At Northallerton.

Hic jacet Walter Gun,
Some time landlord of the SUN,
Sic transit gloria mundi!
He drank hard upon Friday,
That being a high day,
Then took to his bed, and died upon Sunday.

In the old church of All Saints, in Newcastle.

Here lies poor Wallace,
The prince of good fellows,
Clerk of Allhallows,
And maker of bellows.
He bellows did make 'till the day of his death;
But he that made bellows could never make breath.

AXIOMS IN FARMING.

The following maxims are by Thomas Cooper, Esq.

1. Two crops of grain should not succeed each other: they should be separated by potatoes, clover, grass, turnips, beets or carrots for stall feeding.

2. Good agriculture requires no naked fallows: fallow crops [any hoed crops] that compel you to keep the ground clean while they are growing, answer the purpose.

3. Manure once in four years.

New-England Farmer.

THE FARMER.

BALTIMORE, FRIDAY, MAY 9, 1823.

☞ The committee of arrangement have decided, that the next Maryland Cattle Show, shall be held at the Maryland Tavern on the Frederick Road, in the month of October next—the day will be announced, after consultation has been held with the society on the Eastern Shore. In the mean time the premiums to be awarded, have been agreed upon, and will be proclaimed in the next Farmer—when it appears, we hope the Editors in this State, and the District of Columbia, will copy it into their respective papers.

* * *

A GREAT CONVENIENCE FOR GOOD HOUSEWIVES.

Daniel Richardson, an ingenious and respectable mechanic, has brought to great perfection, he REFRIGERATOR or Portable Ice House.—Good housewives only can calculate the many useful and œconomical purposes to which this contrivance may be applied. The improvements made by Mr. Richardson, have so far perfected the Refrigerator, that it may now be fully relied upon, for keeping butter, milk, meat, eggs, fruit, vegetables, or any article of househould consumption, perfectly cool, fresh and pure. All the above named articles, may be preserved in these machines, as long as desirable, perfectly sweet, clean and free from taint. The Refrigerator may be deposited in the cellar, in the garret, in any part of the house, or even in the open sun, without any perceptible injury to the contents; it does not require to be replenished with ice, more than once in three days, during the hottest season; and it is attended with another advantage—complete security against every species of vermin, to which it is totally inaccessible, and in winter, it will keep any article from freezing, that is deposited in it. Every family ought to have one—the price is from $15 to $25, according to size—and the manufactory is in East-street, opposite Mr. Nevins' Church.

* * *

☞ We have succeeded in obtaining some very interesting information, respecting the preparation of flax, which will be given to our readers, in the next farmer, if, in the mean time, we obtain the necessary engravings of the machinery. The result of this information is, that all attempts to dress it, without wretting, have been unavailing for practical and common use—and that of the two modes of wretting, by dew and water—the latter is the more expeditious, and in other respects, the preferrable one.

* * *

LATEST FROM ENGLAND.

The ship *Minerva*, Capt. Wilson, in 28 days from Liverpool, has brought papers of that place of the 5th April, from which it appears that no accounts had been received of the commencement of hostilities on the Spanish frontier. The Duke of Angouleme had arrived at head quarters, and it is naturally to be inferred from this circumstance, that Spain would be forthwith invaded, if his royal highness did not receive counter orders in a few days from Paris.

The King of Spain, accompanied by six thousand troops, left Madrid on the 20th March, for Seville, as previously settled by the Cortes.

The Traveller of the 31st announces that intelligence had been received by a rapid conveyance from the head quarters of the French army of the eastern Pyrenees, informing of the arrival there of the Duke d'Angouleme, on the 22d March. It had been reported that strong disaffection had been manifested in that division of the French army, (about 32,000 men;) but nothing was said of it in letter by this conveyance. There was a report that Mina entered the French territory on the 17th, but it appears to have been without foundation. Mina was at Perthus on the 18th.

A new Poem by Lord Byron, called "*The Age of Bronge*," was published in London, on the 1st of April.

LIVERPOOL, March 28.

The animation which our cotton market showed last week, subsided on Saturday.

The Liverpool Mercury contains an account of the shipwreck of one of the packets from Dublin for Liverpool. Upwards of *one hundred passengers perished.*

Accounts, it is said, have been received from Admiral Kreusanstern, that a Russian officer had accomplished the extraordinary journey of 50 days on the polar ice, and had arrived at an entirely open polar sea.

April 4. Our cotton market generally has been in a very dull and declining state throughout the past month. Some speculative purchases had the effect of producing a temporary improvement, but, not being followed up to any extent, the demand again subsided, and during the present week the market has been quite as dull and depressed as in any preceding one this year. Our quotations are fully ½*d.* per lb. lower in New Orleans, and ¼*d.* per lb. in every other description, than on the 1st ultimo.

The total sales of the month amount to 48,000 bags, of which 5,000, chiefly new Upland, have been taken on speculation, and 2,000 exported; besides which about 5,000 bags chiefly American, were forwarded into the country unsold.

* * *

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7 to 7 12½—Wheat white, $1 55 to 1 60—Red do., $1 53 to $1 57—Rye. 80 cents—Corn, 60 to 63 cents—country Oats, 50 to 55 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3 50—Herds' Grass do. $3—Timothy do. $4 50—Millet, $3—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $2 50 per bbl.—No. 2, $2 25—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 18¾ cts. per doz.—Hay, $18 per ton—Straw, $11 to 12.

MARYLAND TOBACCO.—Same as last report.

Three hhds. raised by Col. C. S. Ridgley, sold, one at $30—one at $22—and one at $10 50.—two hhds. from Pennsylvania, Westmoreland county, sold at $14 50.

BELLFOUNDER,

The wonderful Norfolk Trotter, imported July, 1822, from England, to Cover this season, 1823, at twenty dollars, and one dollar the Groom—the money to be paid to the Groom at Covering.

This celebrated horse, is a bright bay, with black legs, standing 15 hands high; his superior blood, symmetry, and action, excel those of every other trotting Stallion. He is allowed by the best judges in Norfolk, to be the fastest and best bred horse ever sent out of that county. He has proved himself a sure foal getter, and his stock for size and substance are not to be surpassed—they are selling at the highest prices of any horses in Norfolk.

☞ *BELLFOUNDER* was got by that well known, fast and high formed trotter, Old Bellfounder, out of Velocity, which trotted on the Norwich road in 1806, *sixteen* miles in one hour, and though she broke fifteen times into a gallop, *and as often turned round*, won her match. In 1808, she trotted *twenty-eight* miles in one hour and forty-seven minutes, and has also done many other great performances against time.

Bellfounder, at five years old, trotted *two miles* in *six minutes*, and in the following year was matched for two hundred guineas to trot *nine miles* in *thirty minutes*, and he won, *easily* by *twenty-two seconds.* His owner, shortly after *challenged* to perform with him *seventeen miles and a half* in one hour, *but it was not accepted.* He has since never been saddled or matched.

Old Bellfounder, was a true descendant from the original blood of the *Fireaways*, which breed of horses stands unrivalled, either in this or any other nation. Bellfounder is strongly recommended to the public by the subscriber, as combining more useful properties than any other horse in America, and will stand during the season, at his stable in Charlestown, where all inquiries, post paid, will be attended to.

SAMUEL JAQUES, Jr.

Charlestown, (Mass.) April 22, 1823.

FOR SALE,

A fine bull calf, eight months old, three-fourth Alderny, and one fourth of General Ridgely's famous Dutch stock—price $50, enquire of the Edit :

PRINCE REGENT.

This justly celebrated and well known horse, is a dark bay, full sixteen hands high, of fine form, figure, and great bone—he walks, paces, trots and canters remarkably light, and well. He is in strength, form and figure, what may be conceived in the description of a first rate English coach horse or Hunter, his eye is a large clear hazle, his movements graceful and grand, and his colts where he has stood the last three years, are much admired for their size, action and beauty.

He will stand this season, from the 1st of May, from Saturday till Wednesday morning, in each week at [illegible]'s [illegible], under the direction of Mr. John Wooden; and from Wednesday till Saturday mornings, each week, at the Maryland tavern, four miles from this city, on the Frederick turnpike road, under the direction of Mr. John Wattson—at the rate of EIGHT DOLLARS the season, for each mare, and 50 cents for the groom, the money to be sent with the mares or a note given for the amount, payable on the first day of August next.

Baltimore, April 29, 1823.

N. B. Pasturage may be had at each place for mares, if required.

AGRICULTURE.

Some observations on vegetation, and manures, by the editor of the Emporium of Arts and Sciences.

Agriculture. The art of selecting and raising to the best advantage, those vegetable substances that serve for the use of man.

It is not my intention to enter at large into the extensive theory of this first of arts, or to give a detailed account of practices adopted or recommended by the numerous writers on this prolific subject : but a few *general* observations hitherto seldom noticed in the connection now presented to the reader may furnish more accurate ideas than commonly prevail.

The theory of agriculture relates to I. the properties of the plan itself. II. of the climate and soil in which it is placed. III. the mode of accelerating its growth and increasing its size.

Writers on agriculture, ignorant for the most part of the physiology of animals as well as vegetables, have usually considered and treated of plants as inanimate beings : they are not so.

Every plant is the production of an organized seed endued with the property of vegetable life, and of being acted upon by appropriate stimuli. This vegetable life is originally excited and subsequently continued by the application of what may be called *natural* stimuli, much in the same manner as in animals. Thus the pollen of the pointal received by the chive, and thence propagated to the seed vessel, impregnates the seed, and excites the action of the living fibre, which afterwards proceeds according to the laws of organization peculiar to each plant. This action is continually renewed by the application of vegetable food by means of which the germ is dilated till the plant arrives at its full growth. All this is perfectly analogous to the impregnation of the animal germ in the ovarium, and its subsequent growth to full age and size.

In animals, the muscular fibres have the property of contracting on being irritated. *Irritability* as it is called. So have vegetable fibres.—The sensitive plant, the hedasyrum, the dionæa muscipula of Carolina, the phenomena of plants growing in a dark place and turning to the light, are proofs of this, if not of voluntarity. The separated twigs of hedasyrum, are irritable, like a separated muscle. Mr. Howard has lately discovered the same property in the pollen, on the application of alcohol. (Trans. Linn. Society of London.)

Animals have feeling, perception, or *sensibility*, and the power of voluntary motion. So have plants.

The facts adduced by Percival, Smith, and Darwin, and the whole class of phenomena relating to their search of food, and the propagation of their species seems to put this beyond reasonable doubt. To which may be added the habits and customs of the parasite plants.

Animals though perfect in all their parts, may be stinted in their growth by too small a quantity of food, and by other means ; and this diminution will affect the size of their offspring. The case is precisely the same with plants. By plenty of food and favourable situations, animals may be increased in size. So may vegetables By breeding from selected couples of a large size, the size of the animal offspring is increased.—Hereon was founded the successful practice of the greatest cattle breeder in England, Mr. Bakewell of Ditchley ; and the same set of experiments has been repeated with equal success on plants by Mr. Cooper of New Jersey. Mr. Bakewell increased the flesh on particular bones of his cattle, and propagated this propensity.—Mr. Cooper has in like manner propagated not merely increase of size, but increase of size in particular parts of the plant, and propensities to earlier vegetation.

In animals, appetite may be provoked, and digestion assisted, by the artificial stimuli, of what physicians call *Condiments*, salt, pepper, wine, acids, bitters, &c. Such also is the property of vegetables. Their hands, mouth, and stomach, are in the soil ; and by the application of artificial stimuli, such as lime, common salt, alkalies, plaster of Paris, &c. their roots may be excited to want, to seek, to take in, and to digest more nutriment than they would otherwise use.

Animals may be surfeited with too much nourishment. So a plant will die if set in a mere dung-heap. Animals may be poisoned. So may plants. Every metallic combination for instance, except oxygenated and carbonated iron, and calx of manganese (and lead ?) in small quantities, being poisons to the vegetable.

By the artificial stimuli of condiments, animals may be excited too much, and indirect debility will ensue. So is it with plants. In like manner, excess of these artificial stimuli will take away their beneficial effects, as half a pint of wine may assist, when a bottle will injure digestion. Thus, from the experiments of Sir John Pringle, and Dr. Watson, (Bishop of Landaff) it appears that a small quantity of common salt is a septic to the animal fibre, and a manure to vegetables, while a large quantity, is the domestic antiseptic of cookery, and destroys vegetation altogether. So in the experiments of Judge Peters, two bushels of gypsum will produce a luxuriant crop ; 6 or 8 will prevent it.

In animals, when parts of muscular or other fibres, are weak, diseased and dying, artificial stimuli can be applied to excite an action in the living and healthy parts, by which the dead are separated and sloughed off. So in plants, the artificial stimulus of those substances which are not manures in the sense of affording nourishment to the plants, but only as exciting a stronger and more healthy action in the living fibre, will kill the weak and diseased roots, while they invigorate the more healthy. This is the mode of action (in part) of lime, gypsum, salt, &c. usually classed among manures, but which do not enter into the composition of the plant itself.*

Animals are resolveable into gasses, lime and phosphoric acid. There is no peculiar animal earth. The phenomena of marine animals, the experiments of Vauquelin on the production of lime in the hen, and some other facts, make it probable, that the lime of the bones, as well as their phosphoric acid, is the product of animalization.

Vegetables are resolveable into gasses and fixed alkali by fire : by putrefaction their alkali is either decomposed, or escapes, for no fixed alkali is found on the incineration of vegetables which have undergone completely the putrefactive process. Both vegetables and animals contain in their fluids accidentally, unessential quantities of iron, manganese, and neutral salts. Thus the blood contains iron, albumen, mucilage, the serum, urine, uric and phosphoric acids, with bases of lime, soda, volatile alkali. So in plants, nitre is found in borrage, in nettles, &c. and oxalates in some. Hence it appears, that the essentially component parts of animals and vegetables consist chiefly of two or three gasses.

Again. Animal fibres are made from plants. So true is the scripture exclamation that all flesh is grass ! An ox and a sheep are made up of vegetables, and so are we who devour them. Nothing is nourishment to an animal, but what was originally a vegetable. In like manner nothing is nourishment to a vegetable but what enters into the permanent composition of a vegetable. We find large plants grow in pure sand (Vanhelmont,) in sand and clay, in common clay, in limestone, in limestone and sand, limestone and clay, and in all the combinations of these common earths, nay even in sulphur, in shot, in pounded glass, but we do not find that these earths or either of them, are any permanent and essential parts of the composition of a plant any more than of an animal. In a human body of 200lb. weight, we may find about the fourth or fifth of an oz. of common salt, and we may *perhaps* find in clover the same proportion of gypsum, but these are accidental parts of the composition,

More accurately. When a vegetable is decomposed by means of fire, in close vessels, we procure, 1st. a considerable quantity of water.—2dly. Pyroligneous acid or an empyreumatic vinegar. 3dly. On the top of these and mixed with them, is a quantity of strong oily matter, that smells of tar and smoke. 4thly. A great quantity of carburetted hydrogen gas, to wit, about 50 quarts to the lb. avoirdupois of fine saw dust. All woods, and (I believe) all vegetables, furnish it in some proportion. 5thly. A 5th or 6th in weight of charcoal, and nearly equal in bulk to the vegetable itself ; of this about 90 parts in 100 are frequently pure carbon, when well burnt and freshly made and weighed. 6thly. Alkali : inland plants furnish the alkali of potash ; marine plants generally furnish the alkali of soda. The alkali of potash obtainable from the green woods usually employed for the purpose, does not exceed one part in 16 or 1800 parts. 7thly. earthy salts and iron in minute and accidental proportions.

Now, The water, is hydrogen and oxygen.
The pyroligneous vinegar, is carbon, hydrogen and oxygen.
The oily matter is carbon and hydrogen.
The carburetted hydrogen, is carbon and hydrogen.
The charcoal is nearly pure carbon.
The alkali, is an oxyd of a metal.
The iron, or manganese may be accidental, but one or other is almost always found, though in minute proportions.

Some vegetables, as the farinaceous that contain gluten, and the succulent tetradynamious plants that contain albuminous matter, furnish also azot. So do mushrooms, trufles, and morells, which on distillation give out volatile alkali, the base of which is azot. But the vegetables that furnish azot, are exceptions to a general rule. Lime also in very small quantities, is frequently found in vegetables, but nothing tends to induce us to regard it, as other than an accidental substance.

The result is the same, when vegetable matter is decomposed in the moist way. Thus: let us take the case of a Distillery, and consider the process that goes on there. The bruised grain is mixed with water : then yeast, (that is, carbonic acid gas enveloped in mucilage) is put to it.—The gas acts upon the grain, and decomposition, and new compositions take place. Great quantities of carbonic acid gas are evolved : alcohol is formed : then vinegar, which is alcohol united to oxygen. What do these products amount to, but carbon and hydrogen, and the oxygen imbibed from the atmosphere ? For every drop of vinegar is made at the expense of a particle of alcohol united to a particle of oxygen.

In the case of the decomposition of animal substances, whether in the dry, or the moist way, no acid appears : we get azot, a fetid animal oil, swimming at the top of a volatile alkaline liquor, and sometimes concrete volatile alkali, or carbonate of ammonia comes over. The retort contains an animal charcoal, consisting of azot, carbon loosely combined, the base of the prussic acid, and if bones be used, phosphat of lime.

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* *Vide Sir Humphrey Davy, contra.*

In this case, the azot, the lime, and the phosphorus, seem to be new combinations, the result of animal organization modifying chemical affinity. There are many districts of Pennsylvania, perhaps the best pasture land in it, that do not contain a particle of limestone. Such for instance as a great part of the county of Luzerne and the beech country comprehended between the north east branch of Susquehanna, the New York state line, and the Delaware. There is no finer grass country; but limestone is rare throughout the greatest part of this space. A calf bred up there, will have *bones*, that is phosphat of lime: his flesh will yield *azot*, either by distillation, or by the nitric acid. Where does he get it? The soil contains none; the grass on which he feeds contains none, but the ox is chiefly composed of azot and phosphat of lime!

Hence it appears that about 99 parts out of a hundred of vegetable matter, consist of carbon and hydrogen of which the carbon far exceeds in quantity.

Hence also, the pabulum or food of vegetables, can only be carbon and hydrogen, or those substances which are easily decomposeable into carbon and hydrogen.

Hence animal matter is the best of manures, because, the carbon it contains is more easily disengaged, and the substance more easily decomposed than even putrescent vegetable matter. Hence it is that in steel furnaces and in case-hardening, animal charcoal is thought to aid the operation; the carbon of animal, being more easily separated, than the carbon of vegetable charcoal.

Hence we learn to distinguish, manures of *nourishment*, from manures of *stimulus*, and from *mechanical* manures; and we are taught that every vegetable and every animal substance when decomposed, furnishes pabulum to vegetables; and that every such substance so decomposed is a manure of nourishment, and that nothing else is or can be. It may be taken for an axiom, that from man to a cabbage or a lichen, nothing can be converted into nutriment for the living fibre, but what has been a permanently component part of living fibre before.

Other properties of vegetables there are, *similar* (rather than analogous) to those of animals, which the necessary brevity of a short essay, will not permit to be detailed at length. It may be observed however, that plants like animals may be transplanted from one climate and soil to another, provided the difference be not very great, and care be taken to accustom them gradually to the change. Indeed, vegetables like animals will accustom *themselves* to the change in a generation or two, provided the difference be not above 8 or 10 degrees of latitude or of mean temperature. The range is not yet ascertained.

On the preceding properties of vegetables, and their analogies to animals, may all the agricultural doctrine of manures be well founded.—These analogies have been remarked by others, but their application in this respect has not been heretofore sufficiently observed.

Animals *differ* from vegetables in having a more extended sphere of locomotion. The animal (cases nearly zoophytical, excepted) can move the whole of his body from one place to another—a plant can only move its root-fibres and its branches. The *convolvuli*, and other parasite plants, are in some degree exceptions: but the general rule is, that the immoveable centre of a plant's situation is the place where the germ falls, or the seed or plant is set with intent that it should remain. Hence the use of that kind of manuring which consists in the admixture of soils of various depths and adhesion, for the mechanical purpose of keeping the plant steady.

II. Of the climate and soil.

No experiments have been made to ascertain with precision the bounds of latitude or temperature which prohibit the naturalization of exotic plants. In France, Young has marked the lines of the maize and the vine culture. In this country maize grows tolerably well from lat. 42, and beyond it to Georgia. Wheat is not so good and productive south of Virginia, as in the middle states. The latitudes of cotton and rice, are not yet exactly ascertained. Coffee has not yet had a fair trial in our southern states, nor the sugar cane. Much indeed yet remains to be done in this respect, and much is doing by the British government in the West Indies.

Agriculturists have many vague denominations of soil, such as clay, loamy, marly, sandy, limestone, limestone gravel, sandy gravel, stoney, poor light soil, rich black soil. These are tolerably descriptive in a general way; but as the theory of the art improves, we shall need more accuracy. Of the primitive earths, none need be noticed under this section, but silex or sand; argil or clay: and calx or lime. The others have never been yet found in sufficient quantity to produce any notable effect, except in the hurtful quality of magnesia when combined with lime, as 2 to 3 first noticed by Mr. Tennant. It is evident that for the mechanical purpose of increasing or lessening adhesion, supporting the plant, and admitting its fibres to shoot more freely, clay, sand, and limestone are mutually manures to each other; acting mechanically by their mixture. Thus in Cheshire and Norfolk, in England, the clay and marl pits furnish an excellent and permanent manure to the sandy soil above; and assist moreover in retaining manure and imbibing moisture.

But it is not merely the mechanical mixture of soils that may be useful; for the experiments of M D'Arcet and M. Fabroni have shewn us, that in the temperature of 100° of Fahr. different earths have different capacities for retaining moisture; so that by judicious admixtures, this valuable property in soils may be increased or diminished; and as none of the earths are found perfectly pure in soils, (clay, for instance, retaining 66 per cent. of sand without losing its distinctive character) a field is opened for ascertaining this property in different admixtures and combinations. For Mr. Wedgwood discovered that earths would chemically combine in the moist way.

Besides the tenacity of soils, and their capability of retaining moisture, their *depth* is also to be considered by the cultivator. Some plants have long tap-roots, such as rhubarb, liquorice, carrots, parsnips, madder, &c. These are evidently unfit for any soils, but of loose adhesion and of considerable depth. Equally preposterous would it be to use a soil like the Genesee flats of 20 feet deep of light, rich mould, for grasses that spread upon the surface. Again, where soils are naturally sandy, dry, and arid and the climate warm, plants should be selected, whose roots penetrate deep and beyond the influence of atmospheric evaporation. Thus, in this country as in the south of France, Lucerne, (*medica*) and chicory (*chicorium intubus*) would be luxuriant where no other grass would grow.

III. I come now to consider the mode of accelerating the growth and increasing the size of plants.

This is done by *manures*. Hitherto, every substance added to soil, or to the plant while growing, which effected, or was meant to effect these purposes, was called a manure. But, from what has been said, manure ought to be considered in at least four divisions. 1. Manures of nourishment. 2 Manures of stimulus. 3. Manures of moisture. 4. Mechanical manures.

Manures of nourishment. Five different theories have been started on this subject, the pabulum of vegetables.

1. Practical men have for ages discovered the use of dung in agriculture, and hence the common and oldest theory was, that the juices of decomposed animal and vegetable substances in the gross, were the chief pabulum of plants.

2. Vanhelmont's experiment suggested *water* as the pabulum, but although some plants will live, none will flourish in mere water. The French experiment of the decomposition of water, and the discovery of the excretion of oxygen, give countenance to the opinion that water, though not *the* pabulum, is decomposeable, and is a pabulum; furnishing hydrogen: and it is also a component part of the plant even as water. The curious experiments of M. Braconnot add strength to this opinion. It is not yet known whether plants can decompose azot, but I am strongly inclined to suspect this substance to be a compound, for we have no fact to shew that animals absorb it from the atmosphere.

3. Dr. Hunter, of York, in his *Georgical Essays*, persuaded the world for some time, that oil was the pabulum of vegetables. But neither his theory nor his practice succeeded.

4. Dr. Priestly, who had more right to form theories and conjectures than any man living, (because he furnished more facts of extensive application in chemical philosophy than any other man,) suggested that *phlogiston* was the pabulum. Some experiments of Arthur Young, made in consequence of this supposition, tend to support it. But though in all probability *inflammable gas* may be converted into nutriment to vegetables, yet it is far from being true, that this is the only gas which can. The gasses that escape from a dung-hill contain much carbon, azot, and ammonia, as well as various stimulating saline compounds. We know too, that electricity, and the galvanic fluid, seem to aid vegetation to a certain degree: but the action of these fluids is more satisfactorily accounted for, on the doctrine of stimulus, than of pabulum.—That oxygen is not nutriment, is clear, from its being an excretion of plants in a healthy state, and in vigorous action, under the influence of the sun, as Dr. Priestley, and afterwards M. Ingenhouz discovered. Hence, although fluid manures may contain the elements of phlogiston, or the combinations of phlogiston, this latter can not of itself be taken as the only food of plants. Both plants and animals are resolveable into gasses of which phlogiston may be a part, but there is something else which feeds and dilates the muscles of animals, and the leaves of trees, for they furnish something else.

5. Dissatisfied with former theories, Mr. Kirwan, has proposed *carbon* or charcoal as the food of plants; and declares his opinion that if charcoal could be rendered soluble in water it would be the most efficacious manure. It is true, that charcoal and carburetted hydrogen, are found in the incineration of all undecomposed vegetables, but they contain also alkali, oxygen, and nitrogen, &c; nor is there any fact to prove that charcoal (or the oxyde of carbon) is either soluble in any liquid, or taken up as charcoal by any vegetable, or decomposed by any natural process; soot as a top dressing is a tolerable manure in England, but its use may be accounted

tor from the saline substances it contains. From every fact hitherto known, the pabulum of vegetables, appears to be exhibited to plants generally in the form of a *liquid*. Hence, whatever theory of ingenious speculators be adopted as the simple and homogeneous pabulum of vegetable bodies in a living state, the old theory and the old practice must, and ought to prevail, namely, that the only manure of nourishment to be depended on, is dung, *(i. e.) decomposed animal vegetable substances*; which contains within itself every substance that theory has hitherto assigned as the food of plants, ready to be afforded gradually, by the continual decomposition of the various compounds which the dung contains: and although it may be of use by dung-heaps to aid this decomposition, yet even in an undecomposed, or partially decomposed state, this gradual decomposition amounts in the end to the same thing. This is applicable to ground bone, woollen rags, horn shavings, &c. All the difference is that *time is gained* by the artificial and complete decomposition of these substances.

Manures of stimulus. Whatever accelerates the growth, or increases the size of plants, and does not actually enter into the composition and substance of the vegetable, can only be considered as a manure, by stimulating the healthy fibre of the plant, by destroying the dead and decaying fibres, and by assisting the decomposition of undecomposed animal and vegetable substances dispersed through the soil. It is thus that *gypsum* or plaster of Paris acts, being the most efficacious septic among the neutral saline substances. Of these manures of stimulus, none are as yet in common use, but lime, gypsum, and common salt.

Lime, is limestone deprived of its water and carbonic acid amounting to 44 per cent. by fire.—In this state, its stimulating powers are obviously much greater, than in its natural and neutral state of limestone. But even pounded limestone is a promoter of vegetation mechanically, on clayey and sandy lands; and this earth appears to be a specific stimulus to white clover, and perhaps to the potato. Hereto may be referred the rubbish of old buildings, and marl, which is clay about one half of limestone.

Common Salt. This, until the duty of two thousand per cent. in England, was a very common manure in Cheshire; the facts relating to it, in this point of view, are collected in Watson's *chemical essays*. In this country, Gypsum is much cheaper.

Gypsum, plaster of Paris, *vitriolated lime*, or *sulphat* of lime. This has not been certainly found in any plant, but by M. Model, accidentally, in rhubarb, *(Journ. de phys.* vol. 6. p. 14,) even this I suspect to be a fallacy; for the characters of gypsum were not then well ascertained. About two bushels per acre to clover or corn seem to be a full quantity. It attracts the moisture from the air, and dissolves gradually when strewed on the ground. It is brought here from France and the bay of Fundy, and has also been lately found in New-Hampshire, and on lake Erie. There is also some in Maryland on the Chesapeake, about one hundred miles below Baltimore, and throughout the Genesee country, and on the waters of the Chippawa. As it is not a component part of any plant, either in whole, or in its own component parts, it cannot act upon healthy vegetables but as a stimulus, and upon diseased and dead ones, by its septic power. Experiments remain to be tried as to other manures of this description.

Gypsum particularly deserves attention, considering that it has effected almost a complete revolution in the agriculture of Pennsylvania.—Many thousand acres of land hitherto barren, have been converted into excellent pasture ground, by its surprising influence. Even the products of land, tolerably good, have been in some instances doubled by using it. The theory of its action was not understood. Judge Peters of Philadelphia, who first collected the opinions of our farmers, on the subject of the gypsum as a manure, ventured to suggest, that the vitriolic acid was the fertilizing principle of this manure; But Mr. Priestly of Northumberland, has given this opinion a fair trial, both by means of sulphur and of sulphuric acid, in all proportions, without the slightest appearance of success. We shall have therefore as I think, to recur to the theory first advanced by myself in the year 1793, that it acts as a septic to dead fibres, and as a stimulus to living ones.

Manures of moisture, and Mechanical manures. Their action in giving *depth* by new addition; in giving *tenacity* by mixture, as clay with sand, or *vice versa*—in giving *capacity to retain moisture*, on the principles suggested by the experiments of Fabroni and D'Arcet, is too obvious to require further elucidation.

Such are the ideas that occur to me as throwing some light on the theory of this complicated and most important subject, and suggesting the *rationale* of the application of manures, in cases not hitherto well understood. T. C.

GUINEA GRASS.

The following article is of the first importance to the agriculturist. It has been handed to us by a gentleman of this town, who has himself imported a small parcel of the seed, with a view to test its utility by experiment; and who has requested its publication in our paper, that others interested in the promotion of agriculture, may be induced to follow his example.

We recommend to our readers the perusal of the following communication. There can be no doubt of the correctness of the statement. Its importance, especially to this section of the country, must be self-evident.

[*Cape-Fear Recorder.*

Mr. Smith—I am so much convinced of the immense importance of introducing the culture and propagation of the *Guinea Grass*, and of the highly beneficial consequences that will reward those, who will take the little trouble of trying faithfully, an experiment, that I cannot resist the temptation of making one more effort to bring it into notice. The paper you published was too long for the attention of many readers, and the facts too scattering to obtain their particular notice and recollection. I therefore afford you an opportunity of essentially serving your customers and country, by sending you a short but distinct view of the important subject from the former publication, and an account of my own success.

If it be found to succeed in North Carolina, it will be more valuable than the discovery of a gold mine.

Sir Bryan Edwards—In Jamaica, it is considered next in importance to the sugar cane. Most of the grazing farms throughout the Island, were originally created, and are still supported, chiefly by means of this valuable herbage. Hence the plenty of horned cattle for the butcher and planter; which is such, that few markets in Europe can furnish beef at a cheaper rate, or of a better quality, than Jamaica.

It yields a quantity of grass almost exceeding belief.

From not more than six plants, a pint of seed was given to one person. No doubt but a small proportion of the product.

In the East Indies it grows to the height of seven feet—admits of being frequently cut—makes excellent hay. Cattle eat it both in a fresh and dry state, with great avidity.

Col. Laurens, formerly President of Congress, Ambassador, &c. sowed one-fourth of an acre, of very indifferent land, in drills. Seed sprung, and soon covered the ground with grass four feet high and upwards. In August, he divided one of the roots into twenty-eight parts, which were immediately replanted. Every part took root and grew finely.

Dr. Brown sowed the seed, in the city of Natchez in the month of April, in holes two feet apart. When the plants attained a proper size, he took them up, and dividing the roots, set them out when the soil was wet, filling up the ground he had appropriated for the experiment. Began to cut the grass on the 16th July. 164 stalks from 6 to 7 feet high, growing from one root, weighed together 30 pounds—the number of stalks were 184, some of which measured ten feet eleven inches in length. Some part of the lot very poor soil—grass there 6 and 7 feet high.

One acre will more than support five horses most abundantly the year round.—One-eighth of an acre, of very fertile land, near Fort Adams, from plants set out the first and second week in May, without any trouble except cutting down the first growth of grass on the 20th June, say in five or six weeks, allowed cutting for plough horses and mules, and supplied them with as much as they could eat during the whole summer. On the 25th September it had been cut 4 times, and in two weeks would be cut the fifth.

From twenty roots, the fourth cutting yielded 250 lbs. of green grass.

No kind of grass supports the heat of the sun better—and from the first of July until killed by the frost, it will afford a constant and abundant supply of green food.

The seed should be sown as early in the spring as the danger from frost is over, and the plants set out when two or three inches high. They will readily take root. A basket or two of the young plants will be sufficient for an acre.

☞ One hundred plants would enable a poor family to keep a cow in town, or supply a dray horse with food, all the summer.

EXPERIENCE.

About the 20th of May, Mr. A. S. Allen having kindly brought me some seed, which Mr. Gales obligingly sent me, I sowed part of it in a bed 52 feet long by 5 feet wide, in three drills.—From it I have planted out at Smithville, 187 roots in a bed 23 feet square. I have planted an irregular piece at home, with 200 roots; and from the same bed many more roots can and ought to be taken, it having been sown, by an unskilful hand, irregularly and too thick. This, with a little difference of the soil at one end of the bed from the other, occasions the grass to be uneven. Some of it actually measures a little upwards of 6 feet 6 inches. I should have began to cut this this day, [July 5.]—but observing that Dr. Brown, who sowed as early as April at Natchez, began only the 16th of July, I think I shall defer it till that day. Besides the above bed, which I shall call my experiment bed, I have sown a much larger space of ground, from which I shall have it in my power to give liberally, to any persons, without distinction, disposed to give it due attention, and will leave their names with you.

COLUMELLA.

FROM THE HARTFORD COURANT.

CANADA THISTLE.

A few days since I called on a member of the Litchfield County Agricultural Society, who showed me a piece of ground from which he had easily and effectually eradicated the Canada thistle. As this subject is becoming very interesting to this portion of the county, I trust an account of the process by which this object was effected will not be unacceptable to your agricultural readers.

The secret consists in cutting off the plant near the ground at the change of the moon, or in the new moon, as near the change as possible, in June or July. This, my informant says, will generally destroy all the plants in the first year, but should any shoots sprout the next year, let the same course be pursued, and in two or three years there will not a root remain.

This process of course is better adapted to cases where the evil has but just commenced.—This is the third year from the commencement of the operation on the small piece I was shown, say from two to four rods square; and at this time not a Canada thistle is to be found there; although three years since they constituted the principal growth. That the circumstances attending this case were correctly detailed, was confirmed to me by a neighbour of my informant who was present and who had witnessed the whole process. He informed me that he derived his information from a farmer in Dutchess county, by whom and in whose vicinity this course has been extensively pursued, and with uniform success. The discovery was first made, as I am informed, through the same channel, by an observing farmer in Troy, N Y. Some years since, being much infested with these troublesome weeds, he cut down a quantity of them in the vicinity of his house, and was surprised to find the next year that those he had thus served did not shoot up again. Upon recurring to dates, found they had been cut exactly at the change of the moon in June. This induced the same result, but subsequent and more extensive experiments have determined the best time for cutting these noxious weeds to be as I have before stated.

A FARMER.

Natural History.

PART FIRST.—ON THE CONDITION OF ANIMALS.

Chap. 1.—*On the Duration of Animals.*

Each species of animal is destined, in the absence of disease and accidents, to enjoy existence during a particular period. In no species, however, is this term absolutely limited, as we find some individuals outliving others, by a considerable fraction of their whole life. In order to find the ordinary duration of life of any species, therefore, we must take the average of the lives of a number of individuals, and rest satisfied with the approximation to truth which can thus be obtained.

There is but little resemblance, in respect to longevity, between the different classes, or even species of animals. There is no peculiar structure, by which long-lived species may be distinguished from those which are short-lived. Many species, whose structure is complicated, live but for a few years, as the rabbit, while some of the testaceous mollusca, with more simple organization, have a more extended existence. If longevity is not influenced by structure, neither is it modified by the size of the species. While the horse, greatly larger than the dog, lives to twice its age, man enjoys an existence three times longer than the former.

The circumstances which regulate the term of existence in different species, exhibit so many peculiarities, corresponding to each, that it is difficult to offer any general observations on the subject. Health is precarious, and the origin of diseases generally involved in obscurity. The condition of the organs of respiration and digestion, however, appears so intimately connected with the comfortable continuance of life, and the attainment of old age, that existence may be said to depend on the due exercise of the functions which they perform.

Whether animals have their blood ærated by means of lungs or gills, they require a regular supply of oxygen gas. But as this gas is extensively consumed in the processes of combustion, putrefaction, vegetation and respiration, there is occasionally a deficiency in particular places for the supply of animal life. But, in general, where there is a deficiency of oxygen, there is also a quantity of carbonic acid or carburetted hydrogen present. These gasses not only injure the system by occupying the place of the oxygen which is required, but exercise on many species a deleterious influence. To these circumstances may be referred the difficulty of preserving many fishes and aquatic mollusca in glass jars or small ponds; as a great deal of the oxygen in the air contained in the water, is necessarily consumed by the germination and growth of the aquatic cryptogamia, and the respiration of the infusory animalcula. In all cases, when the air of the atmosphere, or that which the water contains, is impregnated with noxious particles, many individuals of a particular species, living in the same district, suffer at the same time. The disease, which is thus at first endemic or local, may, by being contagious, extend its ravages to other districts.

The endemical and epidemical diseases which attack horses, sheep and cows, obtain in this country the name of *murrain*, sometimes also *the distemper*. The general term, however, for the pestilential diseases with which these and other animals are infected, is epizooty, (from επι upon, and ζωον an animal.)

The ravages which have been committed among the domesticated animals, at various times, in Europe, by epizooties, have been detailed by a variety of authors. Horses, sheep, cows, swine, poultry, fish, have all been subject to such attacks; and it has frequently happened, that the circumstances which have produced the disease in one species have likewise exercised a similar influence over others.

That these diseases arise from the deranged functions of the respiratory organs, is rendered probable by the circumstance, that numerous individuals, and even species, are affected at the same time; and this opinion is strengthened, when the rapidity with which they spread, is taken into consideration.

Many diseases, which greatly contribute to shorten life, take their rise from circumstances connected with the organs of digestion. Noxious food is frequently consumed by mistake, particularly by domesticated animals. When cows, which have been confined to the house, during the winter season, and fed with straw, are turned out to the pastures in the spring, they eat indiscriminately every green plant presented to them, and frequently fall victims to their imprudence. It is otherwise with animals in a wild state, whose instincts guard them from the common noxious substances of their ordinary situation.

The shortening of life, in consequence of the derangement of the digestive organs, is chiefly produced by a scarcity of food. When the supply is not sufficient to nourish the body, it becomes lean, the fat being absorbed to supply the deficiency,—feebleness is speedily exhibited,—the cutaneous and intestinal animals rapidly multiply, and, in conjunction, accelerate the downfal of the system.

The power of fasting, or of surviving without food, possessed by some animals, is astonishingly great. An eagle has been known to live without food five weeks,—a badger a month,—a dog thirty-six days,—a toad fourteen months, and a beetle three years. This power of outliving scarcity for a time, is of signal use to many animals, whose food cannot be readily obtained; as is the case with beasts of prey, and rapacious birds.—But this faculty does not belong to such exclusively. Wild pigeons have survived twelve days, an antelope twenty days, and a land tortoise eighteen months. Such fasting, however, is detrimental to the system, and can only be considered as one of those singular resources which may be employed in cases where, without it, life would speedily be extinguished.

In situations where animals are deprived of their accustomed food, they frequently avoid the effects of starvation, by devouring substances to which their digestive organs are not adapted.—Pigeons can be brought to feed on flesh, and hawks on bread. Sheep, when covered with snow, have been known to eat the wool off each other's backs.

The various diseases to which animals are subject, tend greatly to shorten the period of their existence. With the methods of cure employed by different species, we are but little acquainted. Few accurate observations appear to have been made on the subject. Dogs frequently effect a cure of their sores, by licking them. They eat grass to excite vomiting; and probably to cleanse their intestines from obstructions, or worms, by its mechanical effects. Many land animals promote their health by bathing, others by rolling themselves in the dust. By the last operation, they probably get rid of the parasitical insects with which they are infected.

But, independent of scarcity, or disease, comparatively few animals live to the ordinary term of natural death. There is a wasteful war every where raging in the animal kingdom.—Tribe is divided against tribe, and species against species, and neutrality is nowhere respected.—Those which are preyed upon, have certain means which they employ to avoid the foe; but the rapacious are likewise qualified for the pursuit. The exercise of the feelings of benevolence may induce us to confine our attention to the former, and adore that goodness which gives shelter to the defenceless, and protection to the weak, while we may be disposed to turn, precipitately, from viewing the latter; lest we discover marks of cruelty, where we wished to contemplate nothing but kindness. These feelings are usually the companions of circumscribed and partial observation, and fall far short of the object at which they aim.

It would be impious in us to inquire why the waster has been created to destroy. It is enough if we know that rapacious animals occupy a station in the scale of being. And, while we eagerly explore the various methods employed by the defenceless, to secure themselves from danger, and evade the threatened death; it is suitable for us likewise to contemplate the various means employed by carnivorous animals to gain the means of their subsistence. When we see a hawk in pursuit of a lark, we are apt to admire exclusively, the dexterity of the latter in avoiding destruction, and to triumph when it has obtained the requisite protection in a thicket. We seem to forget that the digestive organs of the hawk are fitted only for carrion; and we lose sight of the benevolence and wisdom exhibited, in giving to its wings a power of inflicting a deadly blow, and rendering the claws suited for grasping, and the bill for tearing in pieces the quarry. We are not, therefore, to take confined views of the animal kingdom, if we wish to read the lessons concerning the providence of God which it teaches. He that causeth the grass to grow for the cattle, and herb for the service of man, likewise giveth meat in due season for the young lions which roar after their prey; and feedeth the ravens, though they neither sow nor reap. We see rapacious and defenceless animals existing, yet we do not observe the former successful in extirpating the latter. Limits are assigned to the ravages of this universal war. The excess only of the population is cut off,—and this excess, on whose production so many animals depend for subsistence, is as uniform as the means used to restrain its limits.

These various circumstances which we have now enumerated as limiting the duration of animals, preserve the balance of life, restrain within suitable bounds the numbers of the individuals of a species, and give stability to that system, the wise arrangements of which can only be discovered by a close examination of the whole.

Chap. 2.—On the distribution of animals.

In examining the zoological productions of different countries, we observe, that the species which are commonly met with in one district, are rare, or not to be detected, in the others. If we confine our attention to any one species, we shall observe, that there is some particular country where the individuals are most numerous, and where the energies of life are exerted with the greatest activity. As we recede from this district, the individuals become less numerous, their increase goes on at a slower rate, and those which are produced are rather of dwarfish stature: at length, we reach the limits beyond which they do not extend. The geographical distribution of each species, therefore, may be represented by a circle, towards the centre of which, existence can be comfortably maintained; but as we approach the circumference, restraints multiply, and life, at last, becomes impracticable. Each species has a range peculiar to itself, so that the circles of different species intersect one another in every possible relation.

The extent of the earth's surface over which the individuals of a species are dispersed, can only be ascertained after a long series of observations, conducted by naturalists in different countries. Hitherto the geographical limits of but few species have been satisfactorily determined. These chiefly belong to the larger species of quadrupeds, as the African and Asiatic elephants, the ass and the quagga, the lion, the hippopotamus, and polar bear. In the tribes of the less perfect animals, the species of which have been investigated by few, the extent of their GEOGRAPHICAL DISTRIBUTION has been very imperfectly determined.

Before proceeding to the examination of the laws which regulate the geographical distribution of any one species, it is expedient that we previously make ourselves acquainted with the range of country it inhabits, the situations in which it has been observed and the peculiar characters it exhibits in these different situations. But while this minute and varied information is requisite for the purpose of investigating fully the physical history of any one species, it is enough, for ordinary investigations, that we ascertain those districts and situations where the individuals are most healthy and most prolific, and those where they do not exist. By comparing the physical circumstances of the former with those of the latter, it will be no difficult matter to discover those conditions which promote the vigour of life in the one, and restrain or destroy its energies in the other. What, then, are those conditions which limit the geographical distribution of species? They appear to be limited to circumstances connected with temperature, food, situation, and foes.

I. TEMPERATURE.

We have already stated, that the degree of heat at the equatorial regions appears to be most favourable for the increase of living beings, and that they diminish in numbers as we approach the poles. There is no latitude, however, which the perseverance of man has yet reached, where living beings have not been observed. The icy shores of the arctic regions are peopled as well as the arid plains or shaded forests of tropical climates. When, however, an inhabitant of the colder regions is transported to a warmer district, the increased temperature is painful, the functions become deranged, and disease and death ensue. The inhabitants of the warmer regions, when transported to the colder districts, experience inconvenience from the change of temperature, equally hurtful to the system, and fatal to its continuance. The polar bear appears to be accommodated to live in a region, whose mean annual temperature is below the freezing point. In the summer temperature of Edinburgh, however well supplied with food, he appears to languish in misery. Cold spring-water poured upon him seems to revive him for a little; but all relief is temporary, the climate is too hot for the enjoyment of life. Destined to live in a climate where the system is required to secrete heat chiefly, it seems incapable of generating the cold requisite to counteract the effects of even a temperate climate. The inhabitants of the torrid regions, on the other hand, seem capable of generating cold chiefly, all their organs being adapted for resisting high temperatures; and hence, when brought to cold districts, they are incapable of generating the requisite degree of heat.

In those districts where the individuals of a species are most vigorous and prolific, the temperature most suitable for existence prevails— The native country of the horse is probably Arabia. There he exists in a wild state in the greatest numbers. In the Zetland Islands, where he he is nearly in a state of nature, he is approaching the polar limits of his distribution. He has become a dwarf. He does not reach maturity until his fourth year, seldom continues in vigour beyond his twelfth, and the female is never pregnant above once in two years. At the line where the energies of the horse terminate, however, the rein-deer becomes a useful substitute. Its equatorial limits do not reach the shores of the Baltic.

The variations of the seasons, which bring along with them corresponding changes of heat and cold, exercise a powerful influence on the distribution of animals, in reference to temperature. Some species appear to possess a considerable range of temperature, within which life can be easily preserved, and all its functions regularly performed. We do not mean to intimate, that there is any animal which can live in our climate, for example, and remain uninfluenced by a difference of temperature of upwards of twenty degrees between summer and winter. The constitutional arrangement suited to the one season, would be prejudicial during the continuance of the other. But there are many animals which live in the same district both in summer and winter, and even in districts differing considerably in their mean annual temperature. What, then, are the means employed by these species to preserve life in the midst of such vicissitudes? The power of producing heat or cold, is a property obviously possessed by the warm-blooded animals and probably in an inferior degree by those which are termed cold-blooded. But in all the efforts made by the system, to secrete extraordinary degrees of either heat or cold, there is so great a portion of vital energy expended, that exhaustion and death follow its long continuance. In all cases where the influence of the seasons are to be resisted by efforts of this kind, it would be requisite to continue them uninterrupted for many months. These efforts, however, are diminished in extent and duration by a variety of the most wonderful arrangements, exhibiting the infinite resources of that Wisdom which planned the constitution and continuance of the animal kingdom. To the chief of these compensating or counteracting circumstances, we shall now briefly advert.

(To be continued.)

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE, TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

Of two or more evils, a wise choice will always select the least; but of two or more benefits, the greatest.

In attending to the different objects of internal improvements which have lately been proposed, as being of superior importance in promoting the interests and future prosperity of Maryland, I have noticed sundry canals: one, for example, from above the obstructions in the Susquehanna river to the city of Baltimore; the Potomac canal, from the town of Cumberland, upon that river, down to tide water in the District of Columbia; the cross-cut canal, as it has been called, from the said tide water to Baltimore; also a canal to issue out of that of the Potomac, at the highest eligible point of separation, and from thence to pursue the most eligible route to Baltimore—which, for distinction, I shall designate by the name of the junction canal; because, in my opinion, its most advantageous location would be to form a junction between the Susquehanna and Potomac canals; and the Chesapeake and Delaware canal, to open a more direct water communication between the cities of Baltimore and Philadelphia.

That these are *all* objects of great importance, I am disposed, most readily, to grant; but I presume it will by no means follow, that they are all so equally poised in the interest of Maryland, as for neither to be entitled to a preference. By a late writer in the Federal Gazette, who has particularly recognized all the abovementioned canals except the junction, we are told, that *the true means to effect one, is to secure the accomplishment of all*; and in the plenitude of his ardour, after *supposing the Maryland canals to cost five, or even six millions of dollars*, he has enquired, *whether that amount can be an obstacle, taking into view the extended benefits of the work and the immense patronage that it must and ought to receive?*

Were it only a well established fact, that we were in possession of the *necessary* funds, or that the *patronage* in favour of the undertaking would, doubtless, be adequate to furnish the money to the amount required, I would willingly admit, *there was then no obstacle*—and to me it would be extremely gratifying to know, that either of these facts *certainly* existed. But as this animated inquirer has, in this respect, offered no other proof than his own implied assertion, I confess, that to me some better assurance appears to be indispensible, before we could with safety commence our operations *to secure the accomplishment of all*, to the amount of so many millions of dollars. We ought, at least, to have some distinct knowledge where, and by what means, the money could be obtained to discharge the amount expended.

Let it be understood, that it is by no means my intention, upon the present occasion, to interpose the least discouragement to our undertaking *all*, to the utmost extent that may *rationally* be within our power to accomplish, to *advantage*. On the contrary, this is a business in which I am decidedly in favour of our doing all we can do. It is a business in which I am particularly anxious that all may be willing to display the most laudable liberality; because I am convinced there is no other way in which it is at all possible for us to be liberal with equal benefit, either to ourselves or to the community at large. Hence it is, with me, an ardent desire that we may act wisely; that we may be careful to adopt no plan that may be calculated, ultimately, to defeat the very important object in view; that we may not place ourselves even in a situation *abundantly worse* than the inexperienced boy, who, after having introduced his empty hand into a narrow mouthed jar, grasped it as full as it could hold of filberts, and was then in exquisite distress, in consequence of his being unable to get any out, until an old man, out of pity, advised him to let go the part that he had seized too much, and that *then* he might easily succeed with the rest. But it is evident that our dilemma would, in fact, be abundantly worse, were we *unadvisedly* to undertake too much, and exhaust the *whole* of our funds before any part of the work should be completed. We would not then have it in our power to release from our grasp the part that we had seized too much. We should be completely unable to proceed with the rest. All would *then* be gone. All would *then* be lost. Our labour and expense would both be entirely useless, by reason of nothing being in a situation to make us the least compensation for either.

The writer before mentioned, after having recognized the New York canal, as *a work justly eulogized and admired by all the world, which already begins to enrich and reward, with ample profits, those who have wisely as well as patriotically loaned their money to it*, has affected, with emphasis, to enquire,—*can Maryland hesitate after this example? Does not the canal in New-York teach a practical lesson and stimulate to exertion?* That the canal of New York presents an example *highly laudable*, and *worthy of imitation*, to the utmost practicable extent, I am disposed most willingly to admit; and it is further my candid opinion, that with an equal capacity to accomplish an undertaking of such incalculable utility and importance, it would be very improper were Maryland even to hesitate. But where is the evidence, permit me to ask, of the real existence of this capacity? It is true, the same writer has positively asserted, that, *what has been done there, can be done here*. It is conclusively evident, however, that this is by no means, neither possibly *can be*, the fact,—unless it were also the fact that the state of Maryland were equally as large, or at least as populous, or otherwise as wealthy, as the state of New York.

The palpable error into which the author in question, has very unhappily fallen, may thus be explained from his own words. He says, *it is now ascertained that the canal of New York, will not cost more than seven millions and a half of dollars*. Upon reference being had to the late edition of Morse's Universal Gazetter, published in 1821, the population of that state, according to the last census, appears to be nearly 1400 thousand, for 46 thousand square miles of country, whereas our population at the same time, was only about 407 thousand, for a few square miles *less* than 14 thousand; and owing to one fifth of that extent being understood to be water, we have of land, but very little more than ten thousand square miles. Hence it follows that to do us equal justice, our liberality and our enterprise would be *on a par* with what has been so highly extolled in the citizens of New York, were our population to furnish two millions of dollars, or the extent of our soil one million and a half with a small fraction over in both instances. The correctness of these sums may readily be verified by two small operations in the rule of three, thus—a population of 1,400,000 : is to 407,000 :: as 7,500,000 of dollars : are to 2,000,000, and a fraction equivalent to eighteen hundredths; and 46,000 square miles of country : are to 10,000 :: as 7,500,000 : are to 1,500,000 dollars, and a fraction equivalent to thirteen hundredths.

From the preceding calculations it is evident, that if we are now to be called upon for money to a greater amount than the sums above stated, then are we not called upon to *imitate*, but to *transcend*, the celebrated example of New York; and that *in* form nearly a three, to nearly a four fold ratio, should the sum be 6,000,000. Again, had the cost of the New York canal exceeded its present cost, in the same proportion that their population, or the extent of their soil and ours, upwards of 25,000,000 in the former case, and in the latter, upwards of 34,000,000 of dollars, would have been required for, as our population, 407,000 : is to theirs, 1,400,000 : : so are seven and a half : to 25,000,000; and as our 10,000 square miles of soil : are to their 46,000 : : so are seven and a half : to 34,000,000 of dollars, rejecting both fractions.

These calculations, founded as they are, upon the certainty of geographical evidence, except in relation to the cost of the New York canal, must, themselves, be too certain to be doubted; and I have also been thus particular in my explanations, that every one, capable of performing a small operation in the rule of three, may, if he pleases, ascertain the correctness of the whole, to his own satisfaction; totally independent of any statement of mine. From these premises, which if scrutinized to the very utmost, I trust, will be found to be substantially certain, I am now prepared to draw the following conclusions, equally certain: 1. To every rational understanding, it must doubtless be evident, that the enormous sum of 25 or 34,000,000, would have been entirely too heavy, *even* for the state of New York—and by parity of reason 6,000,000 are equally too heavy for Maryland. 2. The actual fact being now ascertained, that 7,500,000 are in a fair way to be managed, to very great advantage, by New York, it follows, from absolute calculation, that with superior local advantages, to stimulate to exertion, Maryland ought, with equal facility to manage the raising of 1,500,000 or 2,000,000.—3. But as it is understood that 6,000,000 would be required to open the *whole* of the Maryland canals, instead of attempting *all* at once, we are *here* forewarned, out of two or more benefits, wisely to choose the greatest, for which our means may be competent; and, in this way, I am persuaded, we shall have it completely in our power, as I hope *hereafter* more fully to explain, to outstrip New York, and derive from our one and a half, or 2,000,000, far greater benefits, in proportion, than can reasonably be anticipated from their 7,500,000, that is from an expenditure of three and a half, or five times the amount of ours.

WM. KENWORTHY.

Political Economy.

FROM THE PORTSMOUTH ORACLE.

BALANCE OF TRADE.

The remarks which we made in the Journal, a few weeks ago, on the balance of trade, have had the fortune to attract some attention in different parts of the Union. In general, they appear to have produced conviction; though we claim for them no other merit than that of stating plain principles in plain language. As the subject is important, and as several answers to our arguments have been attempted, we shall be pardoned for offering a few additional remarks.

What is called the balance of trade, is the difference between the value of the imports and exports of a country. We attempted to show that when the balance of trade is said to be against a country—that is, when she imports more than she exports—so far from its being a sign of decay and ruin, it is rather a mark of prosperity. When a fisherman carries out with him 50 hogsheads of salt, worth $200, and brings home 450 quintals of fish, worth $1100, he would smile to hear us say, that he was ruining either himself, or his country. He would reply, that he had made a profitable voyage;—his imports exceeded his exports.—When a farmer goes to market with a load of pork which has cost him $50 to raise, and returns with a load of salt and iron worth $75, which he has purchased with the proceeds, besides paying his expenses, he would wonder a little at that political arithmetic which would teach him that he had made a losing journey.

The principal difficulty attending this subject, has arisen from the high rate of exchange. It has been said that when merchants have to give, for many successive months, 10 or 12 per cent. advance for bills of exchange, it is conclusive evidence that the country is getting in debt; that there are not goods enough sent to Europe to pay for those which we bring home, and of course that a high rate of interest is paid for money there. We hope to show, by a plain example, that the whole of this reasoning is fallacious.

Exchange, in its technical sense, is the sum given in one country for the transfer of a debt due in another. When the price given is the same sum as that which is to be received, exchange is said to be *at par*—when it is more than that which is to be received, exchange is in advance, or at a premium. Now, as the design of the purchaser of exchange is to employ the money in the foreign country, where the debt is due, it is obvious that he will never give more advance for exchange, than the sum it would cost him to transport specie to the same place. That is, exchange can never be higher than the freight, insurance, and commission charged upon the transportation of money. For why should A. give B. ten per cent. for one hundred dollars payable in England, when he can send one hundred silver dollars to England for about one and a half per cent.

But it may be said that exchange is at present actually 10 per cent. advance; and yet there are dollars in the country! The apparent difficulty may be removed by a single example.

A. owes a debts in England of $482, which he wishes to pay. He purchases of B. a bill of exchange for £100 sterling, for which he gives a premium of 10 per cent. When he remits it, his account stands thus—

£100 sterling, at par, or $444 - - $444 44
10 per cent. advance - - - - - 44 44
$488 88

He, therefore, has paid here $488 88 for £100 sterling in London. Now what is the value of these one hundred pounds in London? How much of his debt will be paid by it?

By the last advices, dollars were worth in England, 4s. 9¼d. per oz. or 4s. 1¾d a piece. A. therefore, receives in England $482 41 in the place of of $488 88 paid here. He has really given then only $6 47, or *one per cent. and forty-one hundredths* for exchange, instead of 10 per cent.

Now, what would have been the result, if he had shipped specie, instead of buying a bill of exchange? He owes $482 in England; he would therefore ship that sum—

	$482 00
Premium given here for Spanish dollars, 1 per cent. - - - - - - - - - - - -	4 82
Freight, half per cent. - - - - - - - - -	2 41
Insurance, one percent. - - - - - -	4 82
	$494 05

It would have cost him then $12 05, or more than *two and a half* per cent. to have shipped specie. Even if we deduct the premium given for dollars, there will remain $7 23, or *one and a half* per cent. as the cost of remittance; or nine cents in the hundred dollars *more* than the price of exchange. Bills of exchange, therefore, are, at this moment, sold for *less* than their true value. And if they are any criterion of the state of trade, England is in debt to the United States, instead of the United States being in debt to England.

This result will doubtless surprise those, who consider the rate of exchange as a sure standard by which to ascertain the balance of trade. But we have other facts equally conclusive. For many years past, exchange has been from 15 to 20 per cent. in favor of England and Spain, and from 8 to 12 per cent. in favor of the United States against the island of Cuba. Is that island, with all its great and valuable exports, on the verge of ruin? Is she getting in debt from 10 to 20 per cent. a year to Spain, to England, to the United States? We believe there will scarcely be found an advocate for the old doctrine of the balance of trade, that will venture to assert it.

The truth is, the rate of exchange with any particular country, depends more upon the actual valuation of money, than upon any supposed balance of trade. In the United States, dollars have, by law, a fixed value. In England, the price of them fluctuates like that of any article of commerce. If, instead of being worth in England, as they now are, only 4s. 1½d each, they should rise, as in 1810, to 4s. 7d, it is evident that $444 here would again purchase £100 sterling in England. But would such a rise in the value of dollars alter the balance of trade? Would it make our imports less, our exports greater?—Would it be, in itself, any evidence that this country was more or less indebted to England?

In Cuba, doubloons pass for seventeen dollars, while here they are worth but fifteen. Spanish dollars are therefore always worth in Cuba from 6 to 8 per cent. advance, when payment is made in doubloons. This single fact shows the whole operation of the principle. Bills on the United States are always above par, because dollars can be obtained for them; and because dollars, when obtained, can be sold above par for doubloons.—The whole difference in the rate of exchange, therefore, arises from the fact, that the nominal price of commodities is regulated there by doubloons, and here by dollars. As soon as doubloons are directly exchanged for dollars, an advance is put upon dollars, and the difference vanishes. In like manner, the whole difference in the rate of exchange between this country and England arises from the difference of the legal standard of money. The price of commodities here is fixed by dollars; in England, by pounds sterling—representing guineas. When dollars are exchanged for dollars, we have already shown, the difference is in our favour.

Editorial Correspondence.

☞We are truly sorry to learn that the flattering prospect of a great wheat crop is already greatly impaired by the ravages of the fly. Some plants of wheat thus affected, with a view of the insect, in its larva state, may be seen at the Editor's office.

Vineyard, near Georgetown, D. C.
April 27th, 1823.

J. S. SKINNER, ESQ.

Dear Sir,—I send for your acceptance by the schooner Stag, I. Nevitt, master, ten bottles of wine, in a box, and one book; the other book please to send to the honourable Robert Smith, with my respects,—not as president of the Agricultural Society of Maryland,—but as from an old acquaintance and friend. As a society, they appear to be, *as yet*, too much engaged in attending to Bakewell rams, short-horned bulls, rampant stallions, pigs, &c. to condescend to take into view, or even a glimpse, of so trifling a subject as the cultivation of the vine, and making wine—*a thing, which, no doubt, will add (before the end of the present century,) one hundred millions of dollars, annually, to the agricultural products of the United States.*

Two bottles of the wine marked "Champaign," was made from the Munier, or Miller Burgundy grape, just as they were turning to ripen. I was obliged to pull them then, as they began to crack and burst, and the bees were also making great havock among them. This wine had 60 lbs. of sugar to the barrel of 32 gallons; the grapes, though not ripe, were tolerably sweet. The corks of this wine ought not to be drawn until some time in the month of June, when I expect it will sparkle.

Two bottles, marked "Tokay."—This wine was made of a grape I found at Mrs. Scholl's, at Clarksburg, Montgomery county, Md., and also at J. Johnston, Esq's. Frederick county. I could not trace where the grape originally came from; but a German priest, who saw them ripe, said they were the true Tokay, such as he had seen growing in Hungary. They are a beautiful grape to the eye, and tolerable to eat—but from their manner of growth, &c. I am strongly inclined to think they are a native of this country.

Two bottles, marked "Burgundy," are made from the Schuylkill Muscadel and Constantia grapes. None of these three wines have any brandy, or other spirit in them.

Two bottles, marked "D. M. 1821," are made from the Bland Madeira grape, a native of Virginia, and has at the rate of ten per cent. of spirit in it.

Two bottles, marked "D. M. 1822," had four gallons of spirit in a half pipe, say 55 gallons.—These last four kinds had from 25 lbs. to 30 lbs. of sugar to the barrel. That marked champaign was made the first week in August last—the others in September, except that marked 1821. The tokay appears to have undergone a very complete fermentation, and scarcely a particle of the saccharine quality in it left undecomposed.—The burgundy ought to be one year older to complete its fermentation; or, probably, its saccharine quality might be decomposed and become alcohol by next August. But I shall not have an opportunity of knowing, as the quarter cask is out, and not one dozen of the wine left. I have two barrels of wine made from the same grapes, but they are not so good as this cask was,—one having more flavour, and the other is meagre, owing to the different stages of perfection in which the grapes were gathered.

I feel myself under great obligations to you for the interest and trouble you have taken in recommending the cultivation of the vine, &c. In consequence of which, I have sold this season about 7,000 cuttings, and gave to gentlemen who have sent me cuttings, &c. near 2,000 more—and they have been sent as far as Boston, north-eastward, and to beyond Savannah, in Georgia, south. But the Virginians have taken a decided lead, and from the number of correspondents I had from thence, and the beginning they have made, (although at the beginning it may appear small,) I have no doubt but that in thirty years from the present time, it will be a considerable article of export from that state; without, in the smallest degree, interfering with their other agricultural pursuits or products. New York comes next, and from the gentlemen who have got cuttings from me, there will be a fair trial of the cultivation of the grape as far north as Albany;—and a gentleman who lives 80 miles in the country from Savannah, in Georgia, got as many cuttings as any one person, with the intention of making wine.

I am, dear sir, very respectfully,
Your most obedient servant,
JOHN ADLUM.

Monticello, April 11, 1823.

DEAR SIR,—I received, successively, the two bottles of wine you were so kind as to send me. The first, called tokay, is truly a fine wine, of high flavor, and, as you assure me there was not a drop of brandy or other spirit in it, I may say it is a wine of a good body of its own. The second bottle, a red wine, I tried when I had good judges at the table. We agreed it was a wine one might always drink with satisfaction, but of no peculiar excellence. Of your book on the culture of the vine, it would be presumption in me to give any opinion, because it is a culture of which I have no knowledge, either from practice or reading. Wishing you, very sincerely, complete success, in this your laudable undertaking, I assure you of my great esteem and respect.

TH: JEFFERSON.

Montpellier, April 12, 1823.

SIR,—I received, some days ago, the two copies of your memoir on the cultivation of the vine, with a bottle of your tokay; and I have since read your letter, enforcing the importance of making the vineyard an appurtenance to American farms.

The memoir merits well the public attention, to which it is offered. It is so long since I tasted the celebrated wine whose name you have adopted, that my memory cannot compare its flavor with that of your specimen from an American grape. I am safe, I believe, in saying that the latter has an affinity to the general character of the good Hungarian wines, and that it can scarcely fail to recommend itself to discriminating palates.

The practicability and national economy of substituting, to a great extent at least, for the foreign wines, on which so large a sum is expended, those which can be produced at home, without withdrawing labour from objects better rewarding it, is strongly illustrated by your experiments and statements. The introduction of a native wine, is not a little recommended, moreover, by its tendency to substitute a beverage favourable to temperate habits, for the ardent liquors so destructive to the morals, the health, and the social happiness of the American people; and it may be added, which is so expensive to them also: for besides the actual cost of the intoxicating draughts, the value of the time and strength consumed by them is of not less amount.

I shall forward one of the copies of the memoir, as you desire, to the Agricultural Society of Albemarle ; to which your letter will also be communicated, that the members may have the benefit of the suggestions and remarks which it contains. Nothing seems to be wanting to the addition of a desirable article to our productions, but decisive efforts, to which the patronage of the agricultural societies may contribute a seasonable stimulus. With friendly respects,

JAMES MADISON.

J. Adlum, Esq.

STRAWBERRIES.

Mr. Skinner,

In reply to an enquiry of your correspondent R. K. M. in your 6th number of vol. 5, relative to the failure of strawberries which have apparently blossomed vigorously, I would suggest, as the cause, the undue proportion of male and female plants. These can be discovered by their blossoms. I have been, for some time, in the habit of paying attention to this point, with a view to promoting the fruitfulness of my plants. A neighbor of mine, remarkable for his knowledge and skill in gardening, showed me a most beautiful bed in full blossom last spring, from which he did not gather a gill of strawberries, and which he afterwards dug up. In the 2d volume of the Transactions of the Horticultural Society of London, p. 393, August 5, 1817, is a letter to the secretary of the society, from Mr. Michael Keens, gardener of Isleworth, from which the following are extracts, in answer to a letter requesting a detail of his practice in raising strawberries:

"There are many different sorts of hautboys; one has the male and female organs in the same blossom, and bears very freely. But that which I most approve, is the one which contains the male organs in one blossom and the female in another. In selecting these plants, care must be taken that there are not too many male plants amongst them ; for as these bear no fruit they are apt to make more runners than the females. I consider one male to ten females the proper proportion for an abundant crop. I learned the necessity of mixing the male plants with the others by experience, in 1809. I had before that period selected female plants only for my beds, and was entirely disappointed in my expectations of a crop."

These remarks apply to all other varieties, with some difference in the extent of their operation. It may be easily discovered by the stamens, which are the male blossoms. It is a matter perfectly understood by our best practical gardeners, that an attention to the selection of their plants, is well rewarded by an increased quantity of fruit.

A New-Jersey Subscriber.

May 8th, 1823.

THE FARMER.

BALTIMORE, FRIDAY, MAY 16, 1823.

☞ Messrs. S. V. Merrick, & Co. Philadelphia, have been invested with the privilege of making and selling Mr. Pope's newly invented thrashing machines, in any State south of New-York—all persons desirous of knowing any thing more about them, will please therefore address themselves directly, to the above named firm.

The above privilege will cease for any county or state, when the exclusive right for such county or state may be sold.

LIVERPOOL MARKETS—7th April.

From Myers' Price Current.

Montreal Pots have declined considerably, 90 bls. by auction having been sold at 66*s*. 9*d*. and subsequently 150 bls. at 65*s*. 6*d*. to 66*s*. 6*d*.—Pearls have also been sold at a considerable reduction, 56*s*. having been accepted for 10 bls. by auction, and 20 to 30 have since been sold at 55*s*. per cwt. The market has however, since become more firm.

Nothing worthy of notice has occurred this week in Flaxseed, and the market has become languid.

Our Grain market this week, upon the whole, has been rather heavy ; yet some considerable transactions have taken place between the speculators in wheat, at some trifling reduction ; but which, however, has not tended to any general depression, and our quotations remain nearly the same as last week.

50 bags Pimento have been sold at 9½*d*. per lb.

100 casks new Carolina Rice of a mixed quality, have been sold in bond at 23*s*. 9*d*. to 24*s*. per cwt.

500 bbls. Am. Tar have been sold at 14*s*. per cwt.

The sales in Turpentine consist of 500 bbls. at 14*s*. 3*d*. being a decline of 6*d*. per cwt.

Very little has been done in Tobacco, the sales for home consumption and for Ireland this week having been very limited, and only 30 hhds. of Kentucky leaf at 2½*d* per lb. have been purchased for shipment.

Ashes—Pots, N. York and Boston, £3 8*s*. a £3 10*s*.—Pearls, 2 16 a 2 17—Pots, Montreal, 3 6 a 3 7—Pearls 2 15 a 2 16. *Flaxseed*, £2 11*s*. a £3. *Flour*—new in bond, £1 6*s*. a £1 8*s*. *Rice*, Carolina, in bond, £1 a £1 5*s*.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7 25 sales—White wheat, $1 60 to 1 64—Red do., $1 57 to $1 60—Rye, 85 cents—Corn, 56 to 58 cents—country Oats, 50 to 55 cents— Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.— 6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 to 6--Orchard Grass do. $3--Herds' Grass do. $3--Timothy do. $4 50--Millet, $3--Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $2 50 per bbl.—No. 2, $2 25—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 per lb.—Eggs, 12½ cts. per doz.—Hay, $18 per ton—Straw, $11 to 12.

Maryland Tobacco.—Fine yellow, $27 to 35 scarce—good do $20 to 25 do.—inferior do. $15 to 18 do.—spangled $15 to 18 do.—fine red $10 to 14—good do, $6 to 8—common do. $4 to 6, plenty—dark $3 to 4 do.—seconds $1½ to 6 do.

Mr. John Kilgour of St. Clement's bay, St. Mary's county, Maryland, sold 12 hogsheads on Monday last, 8 crop and 4 seconds, for 6 and 4 dollars—the same quality it is said, would not now sell so well by $1 per hundred at least.

There may be seen in the office of the American Farmer, and we invite planters to look at them, several samples of tobacco, extraordinary by every circumstance connected with them, amongst others, there are

Some bundles of tobacco, from the estate of Governor Goldsborough, on the Eastern Shore of Maryland—of beautiful texture, and very bright nutmeg colour—exceeding in these respects any thing we have seen *from that section* of the state, whence we seldom see any but of the *dullest quality*. There are also some bundles from *Sideling Hill*, in Somerset county, Pennsylvania, which came down the Juniata and Susquehanna, to this market.

This sample excels in the *brilliancy of its yellow colour*, even any thing we have yet seen, and certainly gives to the cultivator, W. C. Dorsey, a right to the highest rank amongst planters—the more so, as we presume the cultivation of tobacco must have been very recently undertaken in that part of the country. It further establishes the fact of the peculiar adaptation of the soil there to the production of tobacco of the first quality. We hope that $35 12½, the price obtained in this case, has rewarded Mr. Dorsey for his enterprise and trouble. We understood that Mr. Goldsborough's tobacco would, when left with us, have commanded $20 per hundred. It is probable it was produced on land in Dorset county of lighter quality than the generality of Eastern Shore land,—but it proves that Mr. Goldsborough has made himself thoroughly acquainted with the most approved mode of cultivating and handling that commodity.

PRINCE REGENT.

This justly celebrated and well known horse, is a dark bay, full sixteen hands high, of fine form, figure, and great bone—he walks, paces, trots and canters remarkably light, and well. He is in strength, form and figure, what may be conceived in the description of a first rate English coach horse or Hunter, his eye is a large clear hazle, his movements graceful and grand, and his colts where he has stood the last three years, are much admired for their size, action and beauty.

He will stand this season, from the 1st of May, from Saturday till Wednesday morning, in each week at Govan's Town, under the direction of Mr. John Wooden; and from Wednesday till Saturday mornings, each week, at the Maryland tavern, four miles from this city, on the Frederick turnpike road, under the direction of Mr. John Wattson—at the rate of EIGHT DOLLARS the season, for each mare, and 50 cents for the groom, the money to be sent with the mares or a note given for the amount, payable on the first day of August next.

Baltimore, April 29, 1823.

N. B. Pasturage may be had at each place for mares, if required.

AGENTS FOR THE AMERICAN FARMER.

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AGRICULTURE.

FOR THE AMERICAN FARMER.

Sir,

I have great pleasure in sending to you for insertion in the "American Farmer," extracts of two letters, which I received from a young gentleman of Philadelphia, while on his travels in Europe. From the interesting nature of their contents, I solicited permission of the writer, who has returned to this city, to publish them; and he having consented, I cannot withhold them any longer from your readers; who, I am sure will, like myself, derive both amusement and useful information from them.

With my best wishes for the extended circulation of your excellent journal, I am very respectfully, J. M.

Philadelphia, May 7, 1823.

Liverpool, December 9, 1821.

My Dear Sir,

When in Munich last spring, I had the good fortune to make the acquaintance of a gentleman,* who takes great interest in the advancement of agriculture in Bavaria, and he was so kind as to present me with a number of Pamphlets, treating on the agriculture of Germany, and illustrative of the intentions of the Royal Agricultural Society of Bavaria, of which he is secretary; he also gave me some grass seed. With the view of opening an intercourse between the Philadelphia Agricultural Society and that of Bavaria, I took the liberty of proposing to present these articles in his name as Secretary of the Bavarian Society, as they would be the commencement of an interchange of good offices, that might be highly beneficial to both institutions. The idea pleased him very much, and he requested me to do so, and also addressed the enclosed communication to the Philadelphia Agricultural Society, and desired me to express verbally to the members of it, the great pleasure his society would have in communicating any thing useful to American agriculture, and the satisfaction he and his associates would feel in being in correspondence and amity with an institution that has effected so much good as the Philadelphia Agricultural Society, of whose respectability and utility he appeared to be well informed. The grass seed is called "esparcette" in German, it grows luxuriantly on the miserable gravelly plains round Munich, and attains to the height of our Timothy, [*a*] and grows much thicker; in short, it flourishes where nothing else will exist, and has the excellent quality of great durability. I was shown some that had been sown seven years, it appeared in good condition and likely to continue yet several years: I saw some saintfoin at Holkam this summer, that had been sown fifteen years. Two years ago Mr. Coke *plastered* it, and he thinks it will attain the age of twenty years before he will deem it necessary to turn it in. Mr. Coke, from the experiments he has made at Holkham, where the sea air has great influence, is of opinion, that plaster will answer very well on the sea coast: I myself have seen it used on the sea coast of France. To return from this digression; the esparcette must be sown at the same time that our common red clover is sown.

I have to express my obligations to you for your kind letter of introduction to Dr. Rigby, of Norwich, which procured me the acquaintance of a man eminently distinguished in his profession, and for numerous acquirements in several sciences. Dr. Rigby treated me with the most hospitable kindness, and among numerous other favours introduced me to Mr. Coke, at whose princely establishment, I spent my time in the most agreeable and instructive way. The wonders effected at Holkham, by the skill, industry and capital of Mr. Coke, can only be properly appreciated by a minute personal inspection of them. Whilst at Hoikham, I had in my possession a piece cut out of an American newspaper, a communication from Judge Peters, to the Philadelphia Agricultural Society, relative to an apparatus used under the direction of Miss Coke, for dressing flax and hemp. If you recollect, the judge mentions that application had been made to Lord Castlereagh for permission to send one to America, for the Philadelphia Agricultural Society, which was refused; when Mr. Coke read it, he and Miss Coke laughed heartily at the serious importance attached by his lordship to a thing of such comparative insignificance, and regretted that he should wish to prevent such an instrument from becoming generally useful. I have observed sea-sand used as a manure in Wales, Ireland and in Northumberland county, England. When it is placed, particularly that which contains small shells, on cold, wet or clayey tenacious soils, it has been found useful in counteracting those bad qualities. I do not know if it has been used in that way, in our country. [*b*]

Oporto, August 25, 1822.

I received your favour of the 15th May, which came to hand just as I was mounting my mule to take an extensive tour to the north of Portugal, and through the celebrated wine district of the Douro. I returned two days ago, after an abscence of twenty-two days from this city. As I suppose you have not much acquaintance with this remarkable country, I presume some memoranda of what I have seen, will not be uninteresting to you.

I left Oporto in company with a young English gentleman, of amiable manners and good education, and attended by a man on a mule to carry our baggage, &c. On the 4th instant, we passed through the beautifully hilly environs of this city, which are very well cultivated, almost exclusively in maize; numerous country seats are also situated on fine sites: oak and many other kinds of trees have vines planted at their roots, and now cover them with a luxuriant growth of grapes, which hang down over your head, and of which you may take as many as you wish, by extending your hand, as you ride along the road. After passing through eighteen miles of this fine country, we arrived at the celebrated mineral springs of *Caldas de St. Miguel*, which are very much frequented by persons afflicted with rheumatisms, gout, cutaneous disorders, &c. There were two hundred and eighty patients; and frequently as many as five hundred persons here, for relief by these sulphur baths, which are more powerful than those of *Aix la Chapelle*, *Bath*, *Baden*, or indeed of any I have visited, excepting those of *Banos*, near Salamanca. The springs are five in number, and vary in temperature: the least warm, has 101° of Fahrenheit; the warmest bath has 125° Fahrenheit: it is an oblong well, three feet and a half deep, twenty-five feet long by fourteen broad. All the baths are free to those who choose to take advantage of them. The village is very rural; the principal part of it is built round a square, which is planted with trees and shrubbery, and is ornamented with statues, fountains, seats, &c. Two of the baths are situated at one end of the square, one on each side of the gate by which you enter. The valley in which this village is situated, is extremely beautiful; it is five miles long, and varies in breadth from one to three miles; there are lofty hills on each side, on which are large detached rocks and stones, so whimsically placed by nature, as to resemble castles, villages, monuments of druids, &c. The whole valley is cultivated in the most beautiful manner: the maize is of the finest and largest growth; the vines entwine themselves among the trees, and frequently rise up to their tops; every where there is shade and an agreeable freshness of the air; the cottages of the peasants are scattered every where. This on the continent is quite a curiosity, for the agricultural population is generally collected in towns and villages. A fine stream of water runs between gardens, and thickly planted trees and shrubs, and in some small meadows, I saw some white and red clover for the first time since I have been in Portugal; This stream is turned to such good account, that it not only moves many mill wheels, but is so conducted, as to irrigate the greater part of the valley, which without its assistance, would not in this dry climate, grow one twentieth part of the maize we saw. We left with regret this delightful valley, the residence of an honest, industrious and rich peasantry; and after a journey of three hours arrived just before dark, at Guimaraens, a large ancient city of fourteen thousand people which has figured considerably in the history of Portugal. It has an industrious population, engaged in agriculture, and in the manufacture of cutlery, and linen from Russian flax, and from some little of their own growth. The country round, is an extensive plain or valley of a circular form, surrounded by mountains: it is altogether covered with oak trees with vines growing on them, and maize, like the fine vale of Caldas just described. Next morning, after seeing every thing remarkable, we continued our journey, passing over a high mountain thickly covered with oak trees, and live oak, and about noon, arrived in the ancient and celebrated city of *Braga*, the *Augusta Bracharorum* of the Romans. It was formerly much more considerable than at present, but it is still the capital of the wealthy province of "Entre Minho e Douro," the residence of an indolent archbishop, whose salary amounts to seventy-two thousand dollars per annum. Notwithstanding this is an archepiscopal town, and has nine monasteries and two convents, the hot beds of vice and ignorance, its population of fourteen thousand souls, is remarkably industrious, and manufacturing: making a great quantity of hats, which supply the poor people of Spain, and the greater part of Portugal. They also manufacture a good deal of cutlery, and shawls made of wool, which in England and in the United States, are known under the name of "*Braganza shawls*." The environs of Braga, like those of Caldas and Guimaraens, consist of a valley surrounded by mountains, for this province is entirely composed of mountains and vallies.

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* *Count Hazzi, Counsellor of State to the King of Bavaria.*

[*a*] *As there are two plants cultivated in the United States, under the name of "timothy grass," it may be proper to state, that the one here referred to, is the "Phleum Pratense," Lin.*

The "esparcette" seed arrived safely. It is the saintfoin, (hedysarum onobrychis, Linn.) and much cultivated on the Continent and in England. In the latter country, it is uniformly sown in soils having a substratum of chalk, to prevent the plants wasting themselves by the descent of their roots. In the United States, as we have no chalk, a soil must be chosen having a hard pan below of clay. The only objection to this grass is, that it does not bear drought well, and in this respect, is not to be compared to Lucerne, which if sown in a deep soil, as I have long since seen, will flourish when clover, green grass and all others are dead from heat and want of moisture. I had an opportunity of testing the comparative merits of these two grasses last summer, in the vicinity of Philadelphia. A full opportunity of trying the saintfoin, will be had in Pennsylvania, in consequence of four hundred bushels having been sold this season, principally among the Germans of Berke's county, under the name of "Swiss clover," by a person who imported the seed. This I had from the importer. "Esparcette" is the German name for saintfoin. In Italy, this grass is called lupenella, *and under that name, was introduced among other valuable grasses a few years since by Mr. Crawford, on his return from his embassy to France.*

[*b*] *Sea-sand is very commonly used as a manure on the sea coast of Monmouth county, New-Jersey.* *M.*

The cultivation of Braga is the same as that above described: the people are remarkably industrious. You see the peasant women and girls go to market with great loads on their heads, with the distaff in their hands, which is the common instrument for spinning throughout the Peninsula. The young children and old men are employed in the same manner; and no one appears to be idle, *excepting those connected with the religious houses*, which unfortunately abound in this country. How different is this province from those in the south of Portugal, Estremadura, Alemtejo and Algarve. Here every inch of ground capable of producing any thing is cultivated with the greatest care. Cork, olive, chesnut, oak and elm trees are every where seen, with the vine entwined round their branches, which add to the beauty of the country and produce moisture, so necessary in this dry climate. The population is extremely thick, and is scattered in small villages and in cottages over the country. The people are gay and industrious, and in short, every thing bears the appearance of a flourishing country and a happy people. In the south, on the contrary, you see thousands of acres of land, the greater part of which would bear excellent wheat, and produce oil and wine in the greatest abundance, entirely uncultivated: no trees, few villages of the most miserable appearance; every thing is parched and burnt up by the excessive heat of the sun; not moderated by trees and streams of water as in the north; the people also are serious, gloomy, listless and indolent; badly clothed, and every thing about them indicates misery. Many persons impute this wonderful difference to the influence of climate, but I think with little reason: I would rather ascribe it to political causes, for I have remarked that the neighbourhoods of the seats of arbitrary and impolitic governments are uncultivated and extremely miserable, whilst the districts of the same country that are further removed from the metropolis, though they do not possess such natural advantages, are more prosperous, and have a more independent and spirited population: this remark is strikingly illustrated by two or three examples that I will instance. The environs of Madrid are a barren wilderness, whilst the extremities of the kingdom are perfect gardens, Biscay, Cataluna, Valencia and Murcia. The neighbourhood of Rome, which was formerly teeming with a wealthy and happy people, is now a sickly deserted meadow; whilst the districts, that are removed from the blasting influence of priestcraft, are among the most flourishing countries of the world. Bologna, Ancona, &c. the countries dependent upon Lisbon, are just such as you might expect a bad, despotic and suicidal government would make them; whilst the provinces of the north, where the government has been more a name than a reality, are well cultivated and extremely rich, and inhabited by a respectable and comparatively enlightened people. But to return to our journey. From Braga we made a pilgrimage to a beautiful church and convent, called "*Bom Jesus*," (good Jesus,) situated on the summit of a high mountain, which is resorted to by thousands of the ignorant, bigoted people. From this elevated place, we had a splendid landscape of great extent and beauty. At the distance of fifteen miles, is the ocean, in the intermediate space the valley of Braga cultivated in the beautiful manner peculiar to this province, and abounding in towns, villages and the country seats of wealthy proprietors. To the north, the lofty mountains which separate Spain from Portugal, are the principal objects comprised in the view. From this place, we traversed one hundred and twenty miles of mountainous country, abounding in fertile vallies, which are cultivated by an industrious people, and arrived at the city of Braganza, which like Braga, was a place of more note in former times than at present. This was the residence of the ancestors of the present royal family of Portugal previous to their elevation to the throne: it is now only important for the vast trade it carries on illicitly in British goods; particularly cottons and woollens, with Spain. When we were there, no less than one million six hundred thousand dollars worth of goods were in store, all intended to be smuggled into Spain. This place has but one thousand eight hundred inhabitants, but is rather increasing in consequence of the large trade with their neighbours. From Braganza to Miranda, thirty-five miles, there is nothing remarkable except the rude method of thrashing out the wheat, which is the only produce of this district. A frame, like a sled without runners is drawn by two oxen, which are goaded forward by a little girl, who sits on the sled to add to its weight; underneath the sled, are rows of sharp flints, the size of those used in musquets, which are intended to cut up the straw to about an inch in length, which is kept for the fodder of the cattle; there being no hay, nor any other food but this, for them. In Spain, and in other parts of Portugal, this operation is performed with horses, oxen or mules, and shod in such a manner as to cut the straw to the proper size In the interior of Spain, grass is nearly, and hay is entirely unknown. In Madrid, I do not believe there is a cwt. of the latter used in the course of the year; straw supplies its place altogether. At Miranda, where we were obliged to go through the ordeal of a custom-house examination, previous to going out of Portugal into Spain, we were treated in the most shameful manner. The chief of the office, threw every difficulty in our way, and embarrassed us as much as he could, hoping to get a considerable bribe from us; we finally adjusted all difficulties by leaving in deposit the value of the duty, (ten per cent.) charged on carrying our mules out of one kingdom into the other. We crossed the river Douro, and entered Spain, at the custom-house of Villerino. Here we expected to be treated with the same harshness as on the other side; but we experienced all the liberality and gentlemanlike accommodation, that I am happy to say, I have frequently received from the Spaniards on former occasions. From the frontier to Salamanca, one hundred miles, the country is for the most part mountainous and extremely favourable for sheep, which are in this province, (the kingdom of Leon,) very numerous, and are decidedly the best in the peninsula for their wool. At Bilboa and Seville, (the export towns for Spanish wool,) the Leonese wool sells for, from nine to twelve rials per pound; whilst the Arragon, Asturias, and other good wool is not worth more than six to eight rials per pound. The reason of the great difference in the qualities of this wool is, that the Leonese sheep travel a great deal, (which every one says improves the wool) they being driven in the autumn to Andalusia and the southern part of Estremadura for *pasture during the winter*;* and driven back to their homes, after the 25th of March, where the pasture is more abundant in the summer than in the south. Previous to arriving at Salamanca, we passed through *Los Banos*, a place well known for the efficacy of its hot sulphur baths. The water has the temperature of one hundred and thirty-two degrees of Fahrenheit: the physician appointed by government to watch over the Baths, to see there is no improper use made of these waters, would hardly permit us to bathe in them, without examining us, to see what our maladies were. He could scarcely believe that our only object in trying them was curiosity; he consented at length, when I told him that I had tried those of Aix la Chapelle, Bath, Baden, Caldas in Portugal, &c. without being injured by them; but he required us to promise that we would not remain in more than seven minutes and a half, which was quite unnecessary, for we found the water so very hot, that we could not stay even one minute in it. The physician told me that miracles are effected by the use of these waters, for rheumatisms of long standing, gout, &c. &c. It not being the proper season, which is September, there were not more than one hundred patients using them. At Salamanca we were so fortunate as to meet the Rector of the Irish College of that place, whose acquaintance I had made four months before in Madrid. This old gentleman treated us with the frank hospitality and kindness for which his nation is remarkable. This splendid seat of literature and science is a mere shadow of what it was twenty years ago, previous to the devastations it experienced from the English, French, Spanish and Portuguese armies, by whom it was taken and retaken three times by storm; from these conflicts it has suffered extremely. Out of one hundred and thirty publick buildings, such as convents, colleges and churches, not more than seventy-three now remain; nine only are now attached to the University. Still there is enough remaining in this city, to make it one of the most interesting places for its size, (it only has sixteen thousand inhabitants,) in Europe. The *Ay-untamiento*,† *Plaza de constitucion*, the gothic *cathedral*, the *university*, *library*, the *Irish college*, the *Jesuits college*, the Duke *of Alva's palace*, and many other noble and chaste buildings which it contains, would do honour to Petersburgh, Paris or Dublin: formerly, fifteen thousand students attended here for instruction, which is entirely gratuitous: now there is not quite one thousand students.

The people of this city have a noble enthusiasm for liberty; six hundred of the most respectable of the male population left it whilst we were there, to march as volunteers against their brethren of Navarre and Cataluna, who have been incited to rebellion, and to the destruction of the present order of things by the French government, and by the disaffected nobles and clergy of the country. The citizen soldiers went out of town singing Riego's hymn, and other patriotic songs, and were accompanied by the great mass of the inhabitants a considerable distance. There are forty-two thousand of these militiamen to march from all the provinces of Spain to the same destinations. I sincerely hope these energetic measures will put down the "facciosos" of the north, but I have some fears, that they have been resorted to too late, for the insurgents, owing to the dilatory proceedings of the former ministries, have acquired such a force and consistency, that it will require much blood and treasure on the part of the liberals to destroy. Unfortunately for the country, there has not been a ministry since the revolution, until the present, that has acted with firmness and patriotism; indeed they have winked at, and secretly encouraged rebellion: but the present ministers are all known patriots and clever men, all of them are companions of Riego, and are determined to do all in their power to carry liberty forward triumphantly. After staying in Salamanca seven days, we left it with regret, and turned our faces again towards Pertugal. We passed through no towns of importance. Ciudad-Rodrigo, which, though it has great celebrity from the victory gained by the allied army over the French, is a small town, and situated in an uninteresting, dry and half uncultivated country. I have frequently thought it a pity, that in the dry, parched countries of Spain and Portugal, they do not know the value of gypsum, which is so admirably calculated to serve as a succedaneum for moisture: it abounds in many parts of the peninsula. I have seen between Toledo and Madrid, on the banks of the Tagus, immense hills of this valuable mineral, which might be floated down the river, and thus supply the greater part of the peninsula with a manure that is peculiarly adapted to its dry soil. I have told several sensible men in both countries of the regenerating effect of gypsum on our worn out soil, at which they were surprised, not appearing to know any thing about its excellent qualities. Our distinguished townsman, Mr. M'Clure, who is now in Madrid, told me that in the course of his extensive tours over Spain, he never heard of its being used. In entering Portugal, we crossed a small river, and after traversing thirty miles of interesting country which is thickly covered with almond, olive, and cork trees, we came to St. Joas de Pesqueira, a village situated on the river Douro, and within the celebrated wine district, where all the port wine is manufactured. At this village there are eight noble and wealthy families living, who own the largest vineyards in the district; to one of the wealthiest and most intelligent of these families, we had recommendations, and staid some days at their house. We went over the vineyards with persons competent to explain every thing we saw, so that we got a great deal of information respecting this interesting subject.

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* *The supply of food, not the change of climate is the secret.* M.

† *The Town house.*

The process of making wine is simple. The grapes being perfectly ripe, are cut and carried in baskets on men's shoulders, and put immediately into the press, which is a reservoir of a square figure, three feet deep made of stone or wood: the grapes are trampled upon by the labourers feet as long as any juice can be expressed from them. The juice runs into a vessel on one side of the reservoir, through a hole over which is placed a basket by way of a sieve, to prevent the husks. seeds or stalks from escaping. After the first pressure or treading, the mashed grapes are collected into a heap; this being surrounded by a cord in close circles, and having boards and pieces of wood laid over it, is then pressed by the lever, which is sunk upon it, and allowed to remain in that situation till the liquor ceases to flow. The lever is then raised; the boards and cords being taken off, the mass is broken by hoes, and is made to undergo a second treading, and again it is subjected to the pressure of the lever. This process is repeated a third time, for the purpose of procuring the "*Agua Pe*," a kind of beer resembling very much, lively spruce beer. In the last process, however, the mass when broken up, is as dry as a chip; and therefore previous to pressing it, a quantity of water must be added to it in the proportion of two barrels of water to a pipe that has been obtained of juice. The mass remains under pressure a long time, generally all night, when this infusion is drawn off and put into casks for immediate use of the workmen, and is sold extremely cheap to the lower class of people. The lever is a large beam of wood, which goes across the reservoir, extending five or six feet beyond it, and is connected at its furthest end, with the spindle, where is a female screw: at the upper end of the spindle, is a male screw, while its other end is fastened by means of an iron hook to a ring fixed on a large stone, the size of which is proportioned to that of the press. This method of making wine, is general throughout the peninsula, excepting at probably a half dozen vine yards whose owners use the press, (like our cider press,) which is employed in France and on the Rhine. Intelligent persons tell me, that the French system is more economical, and every way preferable to the Portuguese, and will be adopted when the people become more enlightened and better informed. The best vineyards are on the northern side of the Douro with a southern aspect: the river runs through a deep glen from the east to the west, so that the vines are sheltered from the cold north winds. The best wine is produced in the lowest part of the glen near the river, where there is no circulation of air, and an insupportable heat prevails in summer. This "wine district," properly speaking, for the whole north of Portugal produces wine in the greatest abundance, is only twenty-seven miles long by from two to five miles broad, extending on both sides of the river; no wine but that which is grown in this district, is permitted to be sent to England, therefore it is called "factory wine," and even all the wine produced here cannot go to England; but only that which has been tasted by the "Porto Royal Wine Company's" servants, and which is accompanied by a "*billete*" or permit, can be sent to that country. For this "*billete*" you pay twenty dollars per pipe, so that the English cannot get wine as cheap as the people of the United States, or of any other nation which is not obliged to take factory wines; but any one who has bad wine which he cannot sell for the Brazil, American, or home market can immediately by purchasing a "*billete*" from the corrupt wine-tasters, have it sent to England, so that the object of the institution which was to prevent any but the best wine, (factory,) from going to England, is entirely defeated in this manner; and now the worst wine can easily be metamorphosed into the best by the "*billete*." Last year, no less than twenty-three thousand seven hundred pipes went to Great Britain, which, at the average of £32 sterling per pipe, is seven hundred and fifty-eight thousand four hundred pounds sterling, or, three millions four hundred and twelve thousand eight hundred dollars: but in the year 1812, the exportation to Great Britain, amounted to upwards of thirty thousand pipes, and the average price was forty pounds. The highest price ever given for a pipe of wine was in those days of extravagance three hundred pounds sterling. The whole product of the "wine district," is generally seventy thousand pipes per annum. This year it will fall short of that amount; but last year, it far exceeded it: that which remains after the English supply, is consumed at home, or sent to Brazil, to the north of Europe, and to our country. Six thousand, two hundred pipes were last year distilled into brandy, at five pipes, on the average of wine to one pipe of brandy. The white wine is preferred for distillation, because it is stronger as they say here; but this is an odd reason, for every one knows that in France, only the weakest and most worthless wines are converted into brandy, and they are much better than strong wines for this object. The cultivation of the vine is here more expensive than in any other part of Europe, for the vineyards are all on the acclivities of the mountains, so that to keep the soil from being washed down, it is necessary to build terraces, which is done at great expense, of stones, so that there is a vast inequality of value between cultivated land and uncultivated: the first in a good exposure, is worth from one thousand eight hundred dollars, to two thousand two hundred dollars per acre, whilst the latter will only bring one dollar or two dollars. The vines are kept cut close, none longer than three or four feet; they produce the second year under favourable circumstances, but the fruit is not much valued till the third year: they go on in a progressive course of amelioration until sixty or seventy years old; but whilst the quality of the produce is improving, the quantity is diminishing. The French have a proverb, which is more true in this country than even in France, for the vines last much longer here than there. "*La maison de votre pere, la vigne de votre grand-pere, et l'Olivier de vos aïeux.*" Usually five thousand vines are necessary for a pipe of wine; however, there are instances of fifteen hundred young vigorous vines producing that quantity. All the wine is made by "Gallegos," Spaniards from Galicia. A man with one hundred pipes per annum is considered rich. The gentleman with whom we sojourned, has three hundred and twenty per annum, and in the course of five years, he expects it will reach to five hundred pipes, for the greater part of his estates have been planted only three years. A convent of Franciscan friars has two estates, which last year yielded the enormous quantity of six hundred pipes: the cultivation is increasiog rapidly. The Douro furnishes a cheap, though not very safe means of conveyance to market for the produce of this wealthy country: the rapids in the river, require the greatest care on the part of the boatmen to prevent accidents, which in dry seasons, are by no means uncommon. Our host who has just been elected member of the Cortes, is determined to do his utmost to annul the privileges of the Royal Wine Company, which are of very great injury to this country; inasmuch as they depress industry by withdrawing competition. Among other impolitic rights they possess, the most injurious is, the monopoly of brandy, by which all distillers are obliged to sell to them the surplus of what they do not require for their own consumption, the Wine Company always fixing the price! In consequence of this, not one fourth of the brandy that would be made but for this monopoly is distilled, and it is necessary to import a considerable quantity annually from France and Catalnna. Our friend is also desirous that the commerce between the United States and Portugal, should be augmented: we only import of this wine, about one thousand five hundred pipes annually: it is much cheaper than Madeira or Bordeaux, and Portugal requires a great many articles from our country, which if we had a free trade, would render the connexion reciprocally advantageous. We might export to the north of Portugal, an immense quantity of rice and tobacco, staves, and occasionally some flour. We descended the river Douro to Oporto in a boat, in company with fifteen other persons, and sent our mules down by land. It is impossible to imagine scenery combining so many natural beauties, aided and embellished by human industry, as these sixty miles of this river presented. The first twenty miles, there is nothing to be seen but mountains towering over mountains on both sides of the river, covered to their very tops with vineyards, with here and there a neatly whitewashed wine press-house or country seat: lower down the shores, are more rugged and romantic; the rocks in many places become perpendicular, and the cultivation is entirely changed; the vineyards cease, but the more beautiful method of growing grapes, that of entwining the vines round the boughs of trees, commences. Maize is cultivated in great abundance; every commanding site is appropriated to some church, or convent, or gentleman's seat; and innumerable villages line the shores, which with the great number of large boats passing up and down the stream, give a cheerful and bustling appearance. They reminded me of the life and activity which is seldom seen except in Great Britain, or on some of our own rivers. We arrived at Porto at dusk, just in time to see all the beauties of its rich environs, after an absence of twenty two days, highly pleased with our tour, and very grateful to the simple, good natured, but ignorant people of the country for their hospitality and kindness. We travelled about four hundred and eighty miles.

I observe by some Philadelphia gazettes, that an aloe* has been exhibited in flower. In this country and in the south of Spain, it is the most common plant that grows; I have seen many millions of them in full bloom: they form the common hedges of the fields, they are very solid, but have the disadvantage of spreading themselves too much. In this country, they multiply by shoots or suckers, and augment consequently without cultivation: they do not as is generally believed by the English and Americans, produce a flower but once in a hundred years, and then die; but usually in from six to eight or nine years, when 'tis true they die, but shoots spring out from the roots, and succeed those that perish. The Professor of Botany of the University of Coimbra told me this, and it has been since confirmed by scores of other persons. In the southern province Algarve, where it grows to the greatest perfection, the leaves of the aloe, are cut up and given to cows for want of better fodder; they are also made into baskets, which are handsomely wrought, and sent to all parts of the kingdom. Ropes, &c. are made from the threads of the leaf; but they decay in water, so that it will never be of much utility; the threads however might serve for many kinds of instruments. But oranges and lemons are the most valuable productions of the country as regards profit. At Mr. O'Niell's, (American consul at St. Ubes,) country seat, two miles from St. Ubes, where I staid six days, I got very interesting particulars on this subject. Mr. O'Niell's garden consists of twenty-one acres, principally planted with oranges and some few lemon trees; the latter do not succeed so well. From these two objects alone, he had a clear revenue last year of five thousand dollars, and it would have been six or seven more, but for a misfortune that occurred to his lemon trees in the autumn of 1819, when he lost by frost, no less than one thousand two hundred trees, which is an annual loss of three thousand dollars, until the injury can be repaired by other trees. But he has given up the cultivation of lemons, which are a precarious crop in his garden, owing to its exposure, and pays a great deal of attention to oranges, which are quite sure, and never fail. The best orange trees are from twenty-five years old and upwards; he has one sixty-three years old, which produced last year, six thousand eight hundred oranges, all fit to be shipped. I saw an orange tree at Cintra, two hundred years old, full of fruit. Engrafted trees produce earlier and more, but natural trees produce finer and better fruit. The first is profitable at six years of age, whilst the latter is not so till ten years; and even then, it may produce much or little fruit. The garden is watered artificially by means of wells, from which the water is raised by oxen; for seven months of the year, they work sixteen hours per day; without this, the trees would die, for they require a great quantity of moisture. Every fifteen days, they must receive this salutary nourishment; as there is no rain excepting for about forty days of the year. Mr. O'Niell has no less than five wells, four of which are at work for the above mentioned period, which makes this cultivation expensive. In five years, the oranges and lemons will alone yield fourteen thousand five hundred dollars per annum: for he has replaced the dead lemon trees with orange trees, which will be clear profit, because the lavender, wines, corn, fruit, &c. which he grows, will pay the whole expense of cultivation. Twenty-one acres producing fourteen thousand five hundred dollars, is equal to six hundred and ninety dollars per acre per annum!! This subject should interest our Georgia, Florida and other southern neighbours.

My dear Sir, with very great regard,
Your obliged friend and servant,
G. R

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* *Agave Americana. M.*

Political Economy.

FROM THE PORTSMOUTH (N. H.) JOURNAL.

BALANCE OF TRADE.

We find the following letter in the last New York Statesman. It is a good omen for an opponent to begin to lose his temper.

" *To the Great ' Oracle' at Portsmouth.*

" Sir: You have already told the people, with becoming dignity, what every body admits, that, if a man who has exported one barrel of flour, which has cost eight, and will sell for ten dollars, has received any commodity in return for that flour of the value of 50 dollars, his profit is 42 dollars, and that he and the country are becoming rich.

" Be so good as to throw some light on the following question: If a man export a barrel of flour for which he has paid eight, and which will yield ten dollars, and also export 38 dollars in silver, for which commodities he receives in return 50 dollars worth of foreign fabrics, pray, my dear Oracle, what are the profits of his adventure to himself and to the country?

" AN OBSERVER.

" The above query is induced by the perpetual repetition that the excess of importation is so much clear gain, whereas it is dearly paid for by our precious metals, stocks, public security, &c."

If we understand the question above proposed, it is a very simple one, and admits of a ready answer. The exporter has parted with 46 dollars, and has received 50. His *gross* profit, therefore, is 4 dollars. The amount of his *nett* profit depends upon circumstances not stated in the question If we suppose the voyage to be made to England, the charges will be about 3 per cent. upon the dollar, for

Freight and insurance, equal to	$1 14
And upon the flour, for freight and insurance	1 02
	$2 16

Leaving $1 84 as nett profit to the shipper. If we suppose the shipment to have been made in an American vessel, the ship owner has received $1 66 for freight; and the whole profit to the country has been *three dollars and fifty cents*; the remaining fifty cents being the compensation for the risk incurred in transportation.

We never asserted, and never have heard it asserted, that the whole excess of importation is "*clear gain.*" We only contended that the whole excess of importation was not clear *loss*, an assertion that will be found every week in one-half of the newspapers of the United States.

But from an expression in the last paragraph of the New York writer, it is apparent that his difficulty does not arise wholly from misapprehension of our argument. The cause lies deeper.—Like many of our good citizens who attempt to reason upon the subject, he seems possessed with a superstitious reverence for gold and silver.—" The excess of importation," he says, " is *dearly* paid for by our precious metals," &c. How came we to have the precious metals? Or to take his own example, how came the flour merchant to have thirty-eight silver dollars, as well as a barrel of flour to send to England to exchange for hardware and broadcloth? Certainly, by having sold other barrels of flour for silver.—And what difference does it make to the country whether he exchanges his flour directly with an Englishman for cutlery, or whether he first exchanges it with a Spaniard for silver, and then exchanges the silver with the Englishman?

All trade is effected by *barter*, and where there is no fraud, it is an exchange of equal values.—The fair profits of trade arise from the additional value which a man is able to give his merchandise. The merchant in Charleston, who sends a bale of cotton to Providence, confers upon it, by its transportation, an additional value. It is *worth* more at Providence than at Charleston, and is therefore bartered for a greater quantity of merchandise, whether that merchandise be checks and ginghams, or ounces of silver. The only reason that the price of silver and gold does not vary as much as that of cotton, is, that, being more durable in their nature, they are not effected by crops and seasons, and being easy of transportation, it is not possible to give them a *great* additional value by carrying them from one country to another. The price is therefore settled by an average of the demand of all nations that have a commercial intercourse with one another.

Much of the confusion on this subject has arisen from the attempt made by every nation to settle the relative value of its coins. When congress enacted that every dollar should contain 416 grains of silver—and every cent 208 grains of copper—and that one hundred cents should be equal to a dollar, it fixed the relative value of silver to copper as 50 to 1. They might as well have enacted that one pound of pig iron should always be worth two cents and no more, in every part of the country. A Spanish milled dollar has not unfrequently been exchanged for 106 cents; and yet the statute declares that 100 cents are just equal to a dollar. On the other hand, when there has been a want of small coin, we have known a silver dollar exchanged for 97 cents, the act of Congress notwithstanding. Whenever there is a demand for merchantable silver—such as Spanish dollars for the East India market—the price, compared with that of gold and copper, rises; when there is no such demand the price falls. When merchantable silver can be profitably exchanged for foreign commodities, as in the East Indies and China, dollars are exported; when merchandise of other kinds can be profitably exchanged for silver, as in the West Indies, dollars are imported. Just as wheat is sometimes carried from New York to Liverpool; and sometimes brought from Liverpool to New York.

The quantity of gold and silver in a country is no more a standard of its wealth, than the quantity of iron or wood. So far as it has exchangeable value, it constitutes a *part* of the national wealth, but no more. A merchant does not reck on his property by the number of dollars in his drawer. On the contrary, as soon as he receives money, he endeavours to part with it, by laying it out in the purchase of other merchandise. He cannot add sufficient value to silver dollars, to make a profit by keeping them. A farmer who exchanges his only dollar with a neighbour for a load of manure, has not become poorer by the exchange—though he has "exported all his precious metals." We should think the neighbour who sold his manure for money much nearer to ruin. The purchaser, by a judicious use of the manure, may *add* to its value, and ensure a large profit at harvest; while the seller, if he did not himself *export* his dollar, could add nothing to its value; and, in autumn, would have only the consolation of having "*kept his precious metals at home.*"

With regard to the transfer of stock and public securities to England—so pathetically alluded to by the writer in the Statesman—a very satisfactory account can be given. It is well known that money can be borrowed in England at 4 per cent. upon a pledge of United States Stock. If then, capital can be advantageously employed in this country, it is certainly desirable that the greater part of our public debt should be transferred to England upon such terms. We have in this neighbourhood a very extensive manufactory—the one at Dover, so well described by the editor of the Statesman last summer—and we have another just commenced at Sommersworth, which will be of nearly equal importance. If the proprietors of these establishments should happen to be owners of public stock to the amount of $100,000, and should want to expend that sum in their manufactories, it would surely be better for them to borrow it in England, than to sell their stock here. It could not certainly be a very ruinous transaction for themselves or the country, if they enjoyed the use of the money, and received for interest $2,000 a year more than they paid.

The great fall in the price of Exchange during the last fortnight, illustrates very strongly the remarks upon exchange, which we offered a few weeks ago. But we have already exceeded our limits and fear that we have trespassed too much upon the patience of our readers. At some future time we shall resume the subject.

ON THE MANAGEMENT OF HORSES AND DOGS—BY AN EXPERIENCED SPORTSMAN.

(Continued from page 51, vol. 5.)

The distemper in dogs.

Now to the diseases of dogs.—I am acquainted but with two, which are most fatal to them, namely, the distemper, and a violent bilious fever, which they are very subject to, from hunting in hot weather; particularly if they have not been thoroughly purged before the season. I never as yet have found any medicine which can be relied on as a cure for the distemper in dogs. I have given Doctor James's powders, and many other medicines. Some have died, some have lived. The most efficacious I know of, is one which I have frequently tried for above eighteen years, and never gave any other. It is not always to be relied on; but it is by far more certain than any other. I cured two dogs last year, 1813, which were both very bad, so much so, that I despaired of their lives. The medicine is as follows: TURBITH MINERAL, TWELVE GRAINS, MADE INTO A BALL, WITH ANY SYRUP. Give one dose every day, for three or four days in succession. This is the quantity for a full-grown pointer: give a young puppy, three or four months old, *five grains;* one of seven months old, *seven or eight grains.*

I have observed that dogs, in the distemper, absolutely die for want of nourishment: for, if very bad, they refuse all food. I am convinced that I have saved the lives of several, by drenching them, three or four times a day, with strong beef or horse broth, with a little meal in it; making it a thin gruel.

I have found the turbith mineral, in the distemper, by many degrees the most efficacious; and I can with truth say, it does not often fail when given in the early stage of the disorder. Although this medicine is not a certain cure in the distemper, yet, in a violent and fatal disorder, which dogs are very subject to, *I never knew it fail*, if given when the dog was first taken ill.

The violent Bilious Fever which dogs are very subject to.

The disorder I shall next speak of, is a violent bilious fever, which kills a dog in three days, provided he be not relieved. The symptoms are as follow: first he feeds very sparingly; shortly after that, he loses that fine, florid, flesh colour, in his mouth and gums, which begin to assume a pale cast: in a very few hours after, he will turn as yellow as a guinea in the mouth and eyes. The moment he looks dull and heavy, refuses his food, and begins to look pale in the mouth, before he turns, in any considerable degree, yellow, you must give him the medicine, or I will not be answerable for his cure. The quantity is TWELVE GRAINS OF TURBITH MINERAL MADE INTO A BALL, WITH ANY SYRUP, the same as in the distemper. Give this three or four days following: on the fourth day, he will either be totally out of danger or dead. You must by no means bleed him in this disorder: if you do, you will kill him. In a very few years, I have had six or seven dogs taken with this disorder; and, upon my word, I never lost but one, and that by my own negligence; which I will prove to you.

An old gamekeeper and huntsman, who was my servant, said to me, just as I was at breakfast: "One of your dogs, sir, did not feed last night well; you observed that, and told me to look to the dog, and examine him the very first thing in the morning. I let him, sir, out of the stable, to run about; but I observed him to be rather dull, and not in such good spirits or so gay as the others. I wish, sir, you would come and look at him."

I went directly, and examined him; looked into his mouth, and examined his eyes. I did not observe that he was even faint-coloured in the mouth; but I left him at home that day, intending to return about five o'clock; desiring the ostler to feed and take care of him. I went that day above twelve miles distant, and, finding a great deal of game, I stopped at a village contiguous, sported there the next morning, and shot my way home to where I had left my dog. On my arrival, I found him very bad indeed; he was as yellow as a guinea in his mouth, and lay stretched out and extended on his side. I gave him the above medicine, but he died the next evening. Had I returned home the first evening, I should have saved my dog: the most early attention and relief is necessary in this disorder, as well as in most others.

Of the Mange in Dogs; how best to cure it.

I will now inform you how I have, for above twenty years, treated dogs which have had the mange. About that time I was very much employed in the recruiting service, and could not give up much time to my dogs; so I sent for an old man, who made a good livelihood by curing dogs. My dog had the mange; not very bad, but something much worse with it; he had eight or ten large blotches on his body, as big as large hazle-nuts. The old man took a bottle out of his pocket, and first dabbed the blotches with a bit of tow each two or three times. He then stopped about five minutes, for that to dry in and penetrate; after which he took a pot of ointment, and rubbed the dog in well, for at least ten minutes, under the fore legs, and on the belly, but *particularly on the back bone.* He then desired me not to wash the dog, or let him go into the water; telling me, that he would call in about five days. When he called, the dog was apparently well; so much so, that he said he did not think it necessary to rub the dog again; however, I made him dab the blotches again, and rub once more in.—When he called to be paid, I told him that, upon my honour, if he would discover how the liquid and ointment were made, I would give him two guineas, and never discover it till after his death. He consented. The liquid is thus made:—HALF AN OUNCE OF QUICKSILVER IS PUT INTO A BOTTLE, WITH HALF AN OUNCE OF OIL OF TURPENTINE, FOR ABOUT EIGHT HOURS BEFORE USING IT: SHAKE THE BOTTLE FREQUENTLY, AND SHAKE IT ALWAYS WHEN YOU USE IT, for there will be a sediment at the bottom. The ointment is thus made:—TAKE HALF AN OUNCE OF QUICKSILVER; PUT IT INTO A BOTTLE, WITH HALF AN OUNCE OF OIL OF TURPENTINE; LET IT STAND FOR EIGHT HOURS, SHAKING TTE BOTTLE FREQUENTLY: THEN TAKE FOUR OUNCES OF HOGS-LARD, AND BY DEGREES MIX BOTH TOGETHER, A LITTLE OF EACH AT A TIME, TILL THE WHOLE BE INCORPORATED.—He told me, that he always carried two pots of ointment with him, one stronger than the other, in case of a dog being very bad with the mange. The strongest ointment was made with *only three ounces* of hog's-lard, but with the same quantity of the quicksilver and turpentine.

(To be continued.)

COMMUNICATED FOR PUBLICATION IN THE AMERICAN FARMER.

To the Pennsylvania Agricultural Society.

As it is the implied duty of every member of this society, to contribute his mite to augment the great mass of agricultural information, which this association will doubtless collect, I cheerfully volunteer a short notice of the subject to which I have as a farmer, devoted more attention than to any other, namely, *the selection of the best breed of Cows for a butter dairy.* I have long been of the opinion that in England particularly, the great breeding country—from whence we derive our finest stock—too much attention was paid, and vast sums of money expended, in the vain endeavour to procure a race that shall excel in all the three great points of "the pail, the yoke, and the knife," as they are technically termed; and whilst other gentlemen were selecting the finest forms to feast the eye, and a carcase which if well fed would grow to an enormous size, I wanted a small animal, whose carcase was too valuable for beef, that would subsist on a small quantity of food, bear the heat and drought of our summer and autumn, and produce the greatest quantity of rich and delicious butter, in proportion to the food consumed. In pursuance of this object, I procured a pair of the cattle of the island of Alderney, and, to compare with them, imported from Ireland the celebrated Kerry cow, and from France the beautiful little Brittany. I soon satisfied myself that neither these, nor any other breed in the country, would bear a comparison with the Alderneys. And an experience of now six years, has tended to confirm that conclusion. Still it was said the Alderney cattle were too delicate to bear our severe winters; and in compliance with the notion of the celebrated French naturalist, Buffon, that "man in America became a degenerate animal, and the stories raised by those whose interests led them to endeavour to obstruct the march of improvement in our gigantic country, by stating that the valuable merino sheep introduced into our climate, would no longer produce fine wool. So it was asserted, that although the imported cattle might maintain their individual excellence, yet their descendants would only partake of their good qualities in an inferior degree. My experience has been sufficient to refute these unfounded allegations. I have now a little full bred Alderney cow, reared on my farm, that will be only four years old next harvest. She had her third calf on the first of last month; and on the 19th, we made rather more than ten pounds of delicious butter from twelve quarts of her cream, obtained from fourteen milkings, that is, in one week. Her only food through the winter has been good hay and brewer's grains: the latter article well known to be useful in promoting the secretion of milk, but not increasing the quantity, or improving the quality of butter. A sample of the butter obtained from this cow was sent to the exhibition held last year by the Philadelphia Society for the promotion of agriculture, and pronounced by the best judges to be far superior to the prize butter, though not offered for a premium. One remarkable property of the cream of the Alderney cow, is, the readiness with which it is converted into butter. The week in which we kept it separate, "it came" as the phrase is, in five minutes. And in churning it mixed with the cream of other cows, we usually have had the Alderney butter come first, be taken out of the churn, and the operation continued half an hour or more before a second gathering of butter has taken place.

As I have now an increasing stock of this valuable breed, I hope in future to give some further authentic details in relation to their superior qualities. REUBEN HAINES.

Germantown, 4th mo. 12, 1823.

CATTLE SHOW AND FAIR—No. 4.

For the Exhibition and Sale of all kinds of Live Stock, Agricultural Implements and Household Manufactures—to be held at the Maryland Tavern, on the Frederick Turnpike Road, four miles from Baltimore, in the month of October next.

The Committee appointed on behalf of the Maryland Agricultural Society, to make arrangements for a Cattle Show and Fair, for the exhibition and sale of live-stock, agricultural implements, and household manufactures, have resolved that the said show and fair be held at the place and time above mentioned, and that the following premiums be offered and awarded, to the owners of the best—that is to say:

HORSES.

For the best Stallion - - - - -	$20
the second best - - - - -	10
For the best brood Mare - - - - -	15
the second best - - - - -	10

ASSES.

For the best Jack - - - - - -	$10
the best Jenny - - -	5
the best Mule - - - - - -	15
the second best - - - - -	10

CATTLE.

For the best Bull over 2 years old - -	$15
the best under 2 years - - -	15
the second best do. - - - - -	10
For the best Milch Cow - - - -	15
the second best - - - - -	10
For the best Heifer - - - - -	15
the second best - - - - -	10
For the best yoke of Oxen - - -	15
the second best - - - - -	10

SWINE.

For the best Boar - - - - -	$10
the second best - - - - - -	5
For the best Sow - - - - -	10
the second best - - - - -	5

SHEEP.

For the best Merino Ram - - - -	$10
the best of any other do. - - - -	10
For the best two Merino Ewes - -	10
the best of any other breed - -	10
For the five best fat Wethers - -	10

MACHINERY AND IMPLEMENTS.

For the agricultural Machine or Implement that may be new, and be thought worthy of reward by the society	$20
And a second best - - - - -	10

PLOUGHING MATCH.

For the best Ploughing, by 3 horses -	10
Ploughman - - - - -	2
For the best Ploughing, by 2 horses -	10
Ploughman - - - - -	2

HOUSEHOLD MANUFACTURES.

For the best piece of Kersey, not less than 10 yards, - - - - - - -	$5
For the best piece of Flannel, not less than 10 yards, - - - - - - -	5
For the best piece of Cassinet, not less than 10 yards, - - - - - -	5
For the best piece of Carpeting, not less than 20 yards, - - - - - - -	5
For the best Hearth Rug, - - - - -	5
For the best Counterpane, - - - - -	5
For the best piece of Sheeting, not less than 12 yards, - - - - - -	5
For the best piece of Table Linen, not less than 10 yards, - - - - - -	5
For the best piece of Toweling, not less than 10 yards, - - - - - -	3
For the best pair of knit Woollen Stockings,	1
For the best pair of knit Cotton Stockings,	1
For the best pair of knit Thread Stockings,	1
Each of a size for men or women.	
For the best Grass OR STRAW Hat or Bonnet in imitation, - - - - - -	5

CROPS.

For the best ½ acre of Carrots - -	$ 5
acre of Mangel Wurtzel -	10
acre of Potatoes - -	5
acre of Lucern - - -	5
acre of Ruta Baga - -	5
acre of common Turnips -	5
ten acres of Indian Corn -	10
acre of Flax, (by John Travers, Esq., proprietor of a duck manufactory at Paterson, N. J.) a silver goblet, valued at	10
twenty acres of Wheat, Rye and Oats—each - - -	5
ten acres of Barley - -	5

FERMENTED LIQUORS.

For the barrel of best Cider - - -	$5
5 gallons of best home-made Wine	5
For the sample of the best Butter, not less than 5 pounds, a butter-knife with a silver blade, - - - - - -	5
Second best, - - - - - - -	3

A statement of the manner of managing the cream will be desirable.

The Show and Fair will be held between the middle and the last of October; notice will hereafter be given of the particular days; in designating them, particular regard will be had to the convenience of the Eastern-shore Society.

There will be reserved premiums, to consist of pieces of plate, making the whole sum offered, amount to 500 dollars.

The above premiums will be awarded only for animals bred within the State of Maryland, or within the District of Columbia. But male animals of the several kinds above specified may be entitled to premiums, though bred out of the State and District, provided the owner of such male animal shall secure his continuance in the State of Maryland, to be bred from, for one year from the granting of the premium.

It is to be understood, that whenever a premium for any specimen of Agricultural Implement, piece of Machinery, or article of Manufacture, may be claimed *merely from the want of competition*, or where the thing presented for premium shall be considered as possessing no merit worthy of encouragement, the judges shall have a right at their discretion to withhold such premium.—But this regulation shall not extend to Live Stock, as the best offered will gain the premium without any exception.

In no case will a premium be given for Live Stock, unless the owner shall have notified Mr. J.S. Skinner, of his intention to offer for the same, and shall have entered the particular animal with him three days previous to the Exhibition.

Persons having fine animals, though not intended to be offered for premiums, will gratify the Society by exhibiting them in their field. And for the purpose of preparing proper arrangements, and stalls, for the accommodation of all stock offered for premiums or for show, it is requested that all persons intending to offer stock for show only, as well as those offering them for premium, should give notice to Mr. J. S. Skinner, of such intention at least ten days prior to the Exhibition.

All premiums awarded by the Committee, will be distributed in articles of Plate; and the Committee, to whom the charge of these regulations shall be entrusted, shall determine the nature and devices of the plate and medals so to be distributed. C. RIDGELY, (of H.)

Chairman of the Committee of Arrangement.

JAMES HOWARD, *Secretary.*

Miscellaneous.

PERFUMES A PREVENTIVE AGAINST MOULDINESS.

Dr. M'Culloh, of Edinburgh, has published a paper in the Philosophical Transactions of the city, in which he points out that all essential oils possess the property of preventing the growth of mould. His observations are of such general utility, that we copy them into our more popularly circulated pages for the public benefit.

Ink, paste, leather and seeds, are among the common articles which suffer from this cause, and to which the remedy is usually applicable.—With respect to articles of food, such as bread, cold meats, or dried fish, it is less easy to apply a remedy, on account of the taste. Cloves, however, and other spices whose flavours are grateful, may sometimes be used for this end; and that they act in consequence of this principle, and not by any particular antiseptic virtue, seems plain, by their preventing equally the growth of those minute cryptoganious plants on ink, and other substances not of an animal nature.

"The effect of cloves in preventing the mouldiness in Ink, is indeed generally known; and it is obtained in the same way by oil of lavender, in a very minute quantity, or by any other of the perfumed oils.

"To preserve Leather in the same manner from this effect, is a matter of great importance, particularly in military store-houses, where the labour employed in cleaning harness and shoes is a cause of considerable expense, and where much injury is occasionally sustained from this cause. The same essential oils answer the purpose, as far as I have had an opportunity of trying effectually. The cheapest, of course, should be selected, and it would be necessary to try oil of turpentine, for this reason. The total interruption of all my pursuits has hitherto prevented me from carrying these trials as far as I intended.

"It is a remarkable confirmation of this circumstance, that Russian leather, which is perfumed with the tar of the birch tree, is not subject to mouldiness, as must be well known to all who possess books thus bound. They even prevent it from taking place in those books bound in calf near to which they happen to lie. The fact is particularly well known to Russia merchants, as they suffer bales of this article to lie in the London docks in the most careless manner, for a great length of time, knowing well that they can sustain no injury of this nature from dampness, whereas common curried leather requires to be opened, cleansed and ventilated. Collectors of books will not be sorry to learn, that a few drops of any perfumed oil will insure their libraries from this pest.

"Dr. M. began some experiments with the same agents on wood, to prevent the dry rot, but not having time to carry them on, he recommends the important investigation to others. With regard to paste, he prefers resin to alum as a preservative; but lavender, or any other strong perfume, such as peppérmint, anise, burgamot, are perfectly effectual for years, however the paste is composed." That which the Dr. himself employs in labelling, &c. is "made of flour in the usual way, but rather thick, with a proportion of brown sugar, and a small quantity of corrosive sublimate. The use of the sugar is to keep it flexible, so as to prevent its scaling off from smooth surfaces; and that of the corrosive sublimate, independently of preserving it from insects, as an effectual check against its fermentation. This salt, however, does not prevent the formation of mouldiness. But as a drop or two of the essential oils above mentioned is a complete security against this, all the causes of destruction are effectually guarded against. Paste made in this manner, and exposed to the air, dries without change to a state resembling horn; so that it may at any time be wetted again, and applied to use. When kept in a close covered pot, it may be preserved in a state for use at all times."

He proceeds—"This principle seems also applicable to the preservation of seeds, particularly in cases where they are sent from distant countries by sea, when it is well known that they often perish from this cause.—Dampness, of course, will perform its office at any rate, if moisture is not excluded; yet it is certain that the growth of the vegetables which constitute mould, accelerate the evil, whether by retaining moisture, or by what means, is not very apparent. This in fact, happens equally in the case of dry rot in wood, and indeed in all others where this cause operates. It is a curious illustration of the truth of this view of a remedy, that the aromatic seeds of all kinds are not subject to mould, and that their vicinity prevents it in others with which they are packed; they also produce the same effect daily, even in animal matters, without its being suspected. Not to repeat any thing on the subject of cookery, I need only remark, that it is common to put pepper into collections of insects or birds, without its having been remarked that it had the same power of keeping off mould, as of discouraging or killing the *ptinus omnivorous*, or other insects that commit ravages in these cases.

"In concluding these hints, I might add, in illustration of them, that ginger-bread and bread, containing carraway seeds is far less liable to mouldiness, than plain bread. It will be a matter worthy of consideration how far flour might be preserved by some project of this kind.

[*London Lit. Gaz.*

FROM THE CHARLESTON COURIER.

VALUABLE PRESENT.

We are informed, that John Hume, Jun. Esq. has presented to the Literary and Philosophical Society, for their Museum, a splendid collection of specimens of Ornithology.

The Santee and its neighbourhood, are abundantly fertile in the varieties of the feathered tribe. In the rivers, creeks and rice grounds, the various species of ducks are to be met with in every direction, as well as of other birds; a few months alone, would suffice to collect specimens sufficient to fill an elegant Museum.

The cedar swamp on Washa, the property of John Middleton, Esq. is well calculated to facilitate the study of the naturalist, and he who is an admirer of nature would there be gratified with a sight of her in one of her wildest moods. This swamp is upwards of 10 miles in extent; in most parts the water is deep. The cedar and other trees grow so closely together that the proprietor has been necessitated to cut a path for boats and canoes. At this season, the largest alligators may be seen on every dead log; and in the tops of the trees, the great American herons, white cranes, and fish hawks have built their nests. The Darter of Wilson, a bird so imperfectly known, may be seen in flocks in the air, or perched on trees looking for their food.

During the cold weather, nearly all the varieties of ducks that visit the United States, are to be found in this magnificent repository; and the naturalist who has obtained the proprietor's permission will then find ample field for his researches in this branch of science.

The fields and swamps of Carolina are important, not only for the staple commodities of life—but they yield to the student, faithful resources of information and of interest. The proverbial hospitality of our planters, affords the most ample access to the discovery of rare and valuable information; and the elegant leisure of the opulent cannot be more pleasingly employed, than by enriching the science of nature, and contributing to the treasures of art.

◆

Hop Beer.—For a half barrel of beer take half a pound of hops and half a gallon of molasses; the latter must be poured by itself into the cask. Boil the hops, adding to them a teacupful of powdered ginger, in about a pailful and a half of water, that is, a quantity sufficient to extract the virtue of the hops. When sufficiently brewed, put it up warm into the cask, shaking it well in order to mix it with the molasses. Then fill it up with water quite to the bung, which must be left open to allow it to work. You must be careful to keep it constantly filled up with water whenever it works over. When sufficiently wrought to be bottled, put about a spoonful of molasses into each bottle.

◆

Expeditious Travelling.—We are indebted, says the Albany Daily Advertiser, to a gentleman from Portland, lately on a visit to this city, for the following communication.

Distances from Albany to Portland, Maine, and time taken up in travelling, by steamboats and stages, via New-York, Providence and Boston.

	Miles.	Hours.
From Albany to New-York,	150	18
New-York to Providence,	200	20
Providence to Boston,	40	6
Boston to Portland,	110	12
	500	56

500 miles in 2 days and 8 hours, through the most interesting parts of the Northern and Eastern States, and the Capitals of four of them.

THE WET TAX.

A true statement of Mr. Ichabod Boozy's wet tax for the year 1822, *viz.*

One day spent each week at the store, equal to 52 days, which at 4s per day amounts to - - -	$34 67
Parts of other days spent at the stores every week, besides the above, say in all 20 days at 4s. - - - -	$13 33
One gill new rum drank on each of those days, say 90 gills in all, at 4 cents is	3 60
The same quantity bought to treat his brother, Obadiah Boozy, and other good friends by way of reciprocal civility	3 60
Twenty-five glasses of brandy, bought occasionally to stimulate the system, give an appetite, and brighten the spirits, at 8 cents - - - -	2 00
Thirty glasses of gin and molasses, to counteract the evil effects of the brandy, at 6 cents - - - -	1 80
Losses sustained by reason of his being absent from home, viz:	
Damage to three tons of hay by rain, it not being got in season—good hay half spoiled, 3 tons, at 4 dollars - -	12 00
Damage to the corn by brother Obadiah's cattle, that broke in while the boys were gone a fishing—about 20 bushels lost	10 00
Loss on a yoke of steers which he was obliged to sacrifice to get money to pay his other taxes, worth $40, sold for $30,	10 00
Bill of cost paid on a suit by Capt. T. the trader, for his rum score for 1821	5 68
Total amount of Mr. B's wet tax, for 1822	$96 68

Editorial Correspondence.

Cabin Point, Va. 14*th May*, 1823.

By an order of the Surry county Agricultural Society, I am directed to assure you of its gratitude, not only for your kindness in sending the seed, &c. but for your unremitting zeal in the promotion of agriculture and its rights. I am also, Sir, directed, through you, to present to General T. M. FOREMAN, of Maryland, the thanks of the society for the Bene Oil and Seeds, which, by the members of the society, is duly appreciated. I can assure you it affords me much pleasure in complying with this part of my duty as a member of the corresponding committee of the Surry Agricultural Society.

Waddington, (N.Y.) May 2, 1823.

"I am assured by a seedsman occasionally in my employ, who served his time with one of the first nursery-men and seedsmen in Ireland, that it is absolutely necessary in turnips, to transplant the young plants intended for seed, as soon as they are fit for the first year; so that before obtaining the seed, they will be twice transplanted."

Scotland Neck, May 8, 1823.

"SIR—I send you by mail, one half ounce of the *Georgia Pea*, and one half ounce of the *Black Pea*, which we have lately got in this neighbourhood. The Georgia Pea is prised for its being a good bearer, for its quantity of vine, and from their not rotting; they will lie in the field all the winter and come up in the spring, produce abundance of vines and some peas. From seeing this, I was first led to plant them, as I wrote you some weeks past. The black pea is said to be somewhat earlier, and if possible more hardy. Should you want any of them for another year, I can send you by the way of Plymouth a bushel or two."

Albany, 13*th May*, 1823.

Mr. Clement Saidler, who has formerly been extensively engaged in the worsted manufactory in Ireland, has recently imported into this neighborhood a pair of English sheep (the name of the breed I do not know,) of very heavy carcase (the buck weighed 194 lbs.) and long fleece, suitable for worsted fabrics. He expects more of them this season. It is a fact worthy of remark, that perhaps a fourth or a third of the imported woollen goods are of worsted fabric; and yet no attempt has ever been made, to my knowledge, to establish a worsted manufactory among us, or to introduce the sheep whose fleece is peculiarly adapted for the manufacture of worsted goods. Mr. Saidler deserves lasting credit for his efforts to remedy the defect.

My indisposition prevented my calling up, at its proper time, the bill I reported relative to the agricultural school; for as it contemplated merely a plan of the organization of the studies and labours, and an estimate of the expense of the school, I had given it the latter form. I have very little doubt it would have passed; but as the subject was a novel one to many, I concluded to defer it for another year.

The season is remarkably backward with us. The apple is not in bloom, and probably will not be in less than ten days. Seeds put in the ground (corn, melons, &c.) two weeks ago, have not yet began to vegetate. Winter grain, however, has a pretty good appearance. The winter was very favourable for those crops. Grass has, as yet, a promising aspect.

I am, dear sir, with sentiments of esteem,
Yours, &c. J. BUEL.

J. S. Skinner, Esq.

Milford, Del. May 18*th*, 1823.

The wheat on the Eastern Shore and this part of Delaware is nearly destroyed by the fly. Farmers despair, in some places, of getting their seed. The best will not make more than half a crop.

HESSIAN FLY.

Centreville, Queen Ann's county, Md.
May 15*th*, 1823.

Mr. Skinner,

This is the second week of the session of the county court for this county, and we have, of course, the best information from every neighborhood in it respecting the growing crop of wheat; and most lamentable, indeed, it is. The prospect of an abundant crop, which existed three or four weeks ago, is now completely blasted. So great have been the ravages of the Hessian fly within that period, that many farmers now despair of making their seed, and the crops of almost every one has deteriorated from one half to a third. Our accounts from Kent and Talbot lead us to believe that our brother farmers in those counties will not fare better than ourselves.

A SUFFERING AGRICULTURIST.

Mr. Skinner,

Sir,—Observing in the American Farmer, vol. 5, No. 6, information wanting on the cultivation of Strawberries, I am induced to make known to you a conversation I had with an old and respectable lady, a few weeks since. I was making my complaints of a disappointment I had met with in raising hautboys; I had, after frequent trials, succeeded in raising a very handsome bed of *vines*—but they all proved to be male: she said she once met with a similar disappointment. Having a wish to plant out a new lot very early in the spring, she picked out all the biggest, best looking plants; the consequence was, that she never had any strawberries from those vines. She was afterwards told that the *male* vines made their appearance first, and she had no doubt of that having been the way she lost her strawberries. Possibly that may have been the case with R. K. M. Should any of your correspondents cultivate hautboys, I wish they would be so obliging as to give all the information they can on the subject, and say where a few of the vines can be had. The writer of this assures them, that she would take the greatest delight in doing it for any subscriber to the American Farmer.

A LOVER OF FRUIT.

TO TAKE HONEY.

Mr. Skinner,

There is a gentleman in the lower part of your native county, who knows much better how to take honey from bees than the German mentioned in your paper, (No. 48, vol. 4,) and with less expense than Blake's patent hives. I was once an eye-witness of his taking it, and partook of the nice dainty. He has no need of cap, mask or gloves—so far from shielding himself, he rolls his sleeves up above his elbows, and goes at it when the *sun is at its meridian*, knowing that the bees are all at that time *from home*. The brighter the sun the better, and the month of August is his honey harvest. When he goes, as before mentioned, at mid-day, he takes off the *top* of the hive and takes out as much honey as he thinks proper; nails on the top and goes on to another, and another, until he is done. The honey is as nice and white as it can be—the bees will immediately fill up the vacant place, and the next year you have nice new honey again, as the gentleman informed me.

A LOVER OF HONEY.

May 11*th*, 1823.

HOW TO RECLAIM FROZEN PICKLES.

Albermarle County, May 9, 1823.

Dear Sir,

You have published very many valuable receipts in the American Farmer, please add this to the number, as one which has been frequently tested, and found always to answer. When vinegar in which pickles are preserved becomes frozen, it renders them soft, and unfit for use: in such cases, let the *vinegar* be drained from the same, put into a vessel and boiled, and again poured upon the pickles; they will then become firm and hard as before the frost.

S.

IRON LANYARDS.

Mr. Rogers, a gentleman of Portsmouth, New-Hampshire, has invented and obtained a patent for a new method of setting up and securing Ships' Shrouds. Chains are used instead of Lanyards, and the Shrouds are tightened by a moveable Screw of such power, that one man can with ease set up the rigging; securing at any time every half inch gained from the slack or stretch of the shrouds. For a ship of three hundred tons, each chain will weigh about thirty pounds; and considering their durability, are probably cheaper than rope Lanyards. The apparatus has been exhibited at Merchant's Hall, and approved by many competent judges.

THE FARMER.

BALTIMORE, FRIDAY, MAY 23, 1823.

INVASION OF SPAIN—COMMENCEMENT OF HOSTILITIES.

The regular packet ship Leeds, capt. Stoddart, which sailed from Liverpool on the 24th of April, arrived at New York on the 18th instant—she brings news *sixteen* days later than that received by the Manhattan.

All doubt as to the intentions of the Bourbou Government respecting Spain, is now at an end. The troops of France crossed the Bidassoa, the frontier river, on the 7th of April, and by th latest accounts received at Paris, they appear to have occupied Vittoria, Bilboa, and the port and citadel of Guetaria [a small fishing town, containing about fifty houses] without meeting any serious opposition from the Constitutionalists.

In the British House of Lords, the Earl of Liverpool strongly deprecated the conduct of France towards Spain—and in the House of Commons, Mr. Canning said, "that to any menace or force against Spain, come from what quarter it might, the ministers of England would not be a party."

A letter from Liverpool dated the 24th of April says,—"Ere the receipt of this, you will have heard of hostilities having commenced between France and Spain. How the war will eventuate, time only will determine; but it is pretty apparent, the success of the French has not been equal to their expectation at the onset. Speculations in wheat, anticipating a continual demand, has been re-commenced, and prices here are about 3, and in London 4s. per qr. higher within the week. The business in cotton has been about an average extent, and without any alteration in prices. Nothing done in rice.

Tobacco.—About 200 hhds. Kentucky Leaf have been sold at 2¾ a 4d. per lb.—some small parcels of very fine Virginia for France, at 7 a 7½d.—and about 40 hhds. for Dublin, at 6½ a 9d. per lb.

BALTIMORE MARKET.

PRICES CURRENT.—corrected weekly.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7 25 sales—White wheat, $1 60 to 1 64—Red do., $1 57 to $1 60—Rye, 85 cents—Corn, 56 to 58 cents—country Oats, 50 to 55 cents— Beef, 8 cts. per lb. —Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, $3—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, none in market—Herrings, No. 1, $2 50 per bbl.—No. 2, $2 25—Fine salt 80 to 90 cts. per bush.—Coarse, do. 75—Butter, 20 to 25 cts per lb—Eggs, 12½ cts. per doz. —Hay, $18 per ton—Straw, $11 to 12.

Tobacco generally sells as per last accounts—we have received reports of the following particular sales:—James Mullikin, Montgomery county, Md. 2 hhds—1 sold at $35 50, 1 at $15 50—Thomas Davis, Frederick County, Md.—5 hhds. sold at $20 round *in the County*, before it was packed—W. C. Dorsey, Somerset, Pa 1 red hhd. sold at $18—Richard Snowden, 2 hhds, sold at an average price of $20—*one* of them was worth more than $20.

The news of the actual commencement of hostilities between France and Spain does not appear to have had any effect on the prices of country produce.

Printed every Friday at $4 per annum, for JOHN S. SKINNER Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promply attended to, addressed to J. Robinson, Baltimore.

Internal Improvement.

First hear, or at least fully, *and* equally, *understand both sides, and then Judge.*—No. II.

9. The Baltimore American under date 2nd May, 1823, has announced *that the whole of the stock required for the Chesapeake and Delaware canal is believed to be subscribed.* Should this be the fact, it may be fairly presumed, that none of our money will be wanted upon that occasion, and in that event, *also,* our choice may, with great propriety, be reduced to a single alternative. The cross-cut and junction-canals, or such other substitute canal as may be adopted instead of the latter, in consequence of its being their avowed object to increase the benefits of the Potomac canal, to Maryland, may very correctly be considered as its appendages. Thus, it will only be necessary to collect the evidence in favour of the Susquehanna canal, and of the Potomac canal and its appendages, so as to become correctly acquainted with the merits of both, and then to decide accordingly between them.

10. I am aware that some members of the late Maryland Assembly advocated with zeal an appropriation of three hundred thousand, others of half a million of dollars, out of the state treasury for opening the Potomac canal, and that it also appears to be selected by some of our citizens as the object of our *particular* attention and munificence. But this, it is presumed, was nothing better than a very inconsiderate and over hasty conclusion; adopted without ever waiting to become acquainted with, and much less to investigate the clear and decided evidence that exists, in the greatest abundance, in favour of a new channel to the Susquehanna; and at the same time, without any thing better in favour of the Potomac canal and its appendages, than mere assertion. This, I believe, has constituted the only evidence that has fallen under my notice, which the Potomac advocates have yet produced in its favour. From this circumstance it may, very rationally, be inferred that the subject admits of no other; for, as no judicious mariner would ever substitute cobwebs instead of cordage for a cable, so neither can be it supposed, even for a moment, that anxious advocates, exerting themselves in support of a great public question, would commence with, and for months continue to deal out the cobweb-evidence of assertion, but for the very substantial reason *alone*, of its being completely out of their power to avail themselves of any that was better.

11. Secretary Gallatin, in his celebrated report to Congress in 1808, on roads and canals, has observed, that *in order to be productive it is necessary that a canal should open a communication with a natural extensive navigation which will flow through that new channel.* That a new channel to the Susquehanna, would in this respect, be greatly preferable to the Potomac canal, and its appendages must, *at once*, be conclusively evident to every person who is at all acquainted with the superior magnitude and extent of the former; and it can only be necessary for those who are not, to trace the different branches of the two rivers, upon a large and well executed map, to be perfectly assured of the fact.

12. The Philadelphians *were* some years past earnestly entreated by one of their authors, *to bring to their city the trade of the Susquehanna*, by whom they were also *particularly congratulated upon this great geographical advantage*, which he said, *would give to their market the exclusive custom of a numerous people inhabiting the upper branches of that river.* The same author has also strongly urged the necessity of *engrossing the commerce of the Susquehanna* by completing what he said might, *emphatically be called the golden-link of the water-chain crossing from Reading to Middletown*, and in addition has observed that *this last village is surrounded for* 30 or 40 *miles, in every direction, by a country the most fertile; the most fruitful, and the best cultivated in America; a country which may with great propriety be called the Belgium of the Union.* By the same writer the vast country up the Susquehanna, is afterwards recognised as being excellent for wheat, or, in other words, an *inexhaustible granary* by which might be doubled the exports of Philadelphia.

13. What a vast acquisition *then* would this trade be, if it were added to the exports of Baltimore? Should the country prove *very uneven indeed*, so as to elongate our water route to Middletown to the length of 100 miles, (otherwise, it will, in all probability, be considerably less,) let it be remembered that the one which has been located from thence to Philadelphia is 140 miles. Thus, we have *great cause* for encouragement. Thus, there would be a difference of 40 miles, *or perhaps more*, in favour of Maryland: and it cannot be supposed, that boatmen, when at the point of separation, where they were either to take one route of 140 miles, or an equally advantageous one of only 100 *or less*, would ever be so regardless of their own interest as to prefer the more distant market, unless it should be understood that it would he so much better when there, as amply to reward them for the additional time, labour and expense that would be required.

14. In accordance with this evidence that of our Baltimore authors, who have written upon the subject is also highly favourable. By one of those it has been said, that, *the Susquehanna alone is the natural outlet of a country, of itself sufficiently extensive to maintain a city of the first magnitude.* By another, we are informed, that, *the importance of the Susquehanna is but imperfectly understood; that it may be connected with the Allegany river, and with Lake Erie: that it taps every line of communication in Pennsylvania; that it reaches the Genesee country by the Seneca lake, in the richest part and in the centre of the state of New York; that its commerce is of vast importance, and that there can be no doubt of its immense utility to Baltimore;* and consequently to the state of Maryland at large; for as it is natural for all fluids presently to find the true level, so also the benign influence of increasing intercourse, commerce and wealth, like that of the sun in the firmament, will *speedily*, and with *infallible certainty* expand and diffuse itself *far and wide* through the *whole population.*

15. But that portion of evidence to which, upon the present occasion, I desire most particularly and *respectfully* to invite the candid attention of every individual, and more especially of *every advocate of the Potomac Canal* and its appendages, remains yet to be noticed. The great preference justly due to the trade of the Susquehanna has been ably set forth, and with great* force of reasoning confirmed by a Committee of the Senate of Maryland whose report is recognised under the article "Navigation Inland," pages 380 and 381, of the New Edinburgh Encyclopedia. In that report it is expressly stated that viewing the Navigation of the river Susquehanna as a subject *of great and boundless importance, the Committee have given to it their fullest and most attentive consideration.* Then, after adverting to the citizens of Maryland being convinced of its vast utility and benefit, and their anxious soiicitude for legislative aid in its favour the next sentence of the report is in these words: *Under these circumstances your Committee cannot but recommend it as a subject worthy of the deepest reflection, and fraught with considerations of vital importance to the State of Maryland.*

16. In a subsequent part of the same Report, "That particular district of country to which the " benefits of the turnpike roads in Maryland are " most immediately extended, lying between the " Susquehanna on the one side, and the Potomac " on the other, and extending Northwestward " from Baltimore to the North-mountain, comprehending the Conecocheague valley, is said " to have been, accurately measured on a map of " the country, and found to contain 5000 square " miles. Those portions of the country bordering " upon the various tributary streams of the Potomac, westward of the South-mountain in Maryland, and the Blue Ridge in Virginia, have " also been measured and found to contain " 10,000 square miles." (Only ten thousand, let it be remembered.) "But when your Committee " direct their attention to that portion of the country through which the Susquehanna flows, they " embrace within their view a field of greater " and more enlarged dimensions. By an accurate measurement of those expanded regions " situated upon the Susquehanna and its numerous wide spreading branches they have been " found to contain about 20,000 square miles, exclusive of 10,000 square miles more of adjacent " country, lying upon other waters in the states " of Pennsylvania and New York;" (making together, thirty thousand square miles, let it be recollected, which is an extent of country equivalent to six times our wagon communication, and of three times the magnitude of but ten thousand square miles on the Potomac,) " for the produce " of which country, should the navigation of the " Susquehanna be improved to the extent contemplated, Baltimore must inevitably become " the most convenient market.

17. " From these estimates it is abundantly evident that the trade of the Susquehanna, (flowing as it does through a country of vast extent " and inferior in point of fertility, [let it be remembered,] to no portion of the United States,) " is a trade involving in its nature, a very extensive, permanent and growing interest. Were " the Potomac (continues the report,) improved " to the utmost possible extent, its trade must be " considered but of minor importance, (but of " *minor importance* let it be recollected,) when " compared with that of the Susquehannna; the " Potomac, flowing as it dnes through a country " of comparatively small extent, and by no means " celebrated for its richness and fertility.

18. "In addition to this it may be remarked, " that to however great an extent the productions " of the soil may find their way into the Potomac, (and equally so of the Potomac Canal) " however extensive the demand for foreign commodities at Georgetown and Washington, the state " of Maryland can derive but little benefit from " it. The advantages secured flow into a different channel: they go to fill other coffers—not " those of the State of Maryland. (How very accurate is every syllable of this description!) " But improve the navigation of the Susquehanna, to the extent proposed, (say the Committee) " and you bring to the city of Baltimore, a trade " of incalculable extent and value," (let it be remembered,) the benefits of which must be " imparted to every section of the state, and " which cannot fail richly to remunerate us for " whatever aid may be extended to it.—"

19. The foregoing evidence from its being partly geographical, and in other respects of an unequivocal and well attested character, I trust it will accordingly be appreciated by the public as being entirely divested of the cobweb texture, and

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* *This report was also published in the Baltimore Morning Chronicle under date 18th February*, 1822.

made up of the strongest materials, such as those of a three fold cord, which, it has been very justly observed, *is not easily broken.*'

WILLIAM KENWORTHY.

AGRICULTURE.

JOHN S. SKINNER, ESQ.

Dear Sir,

So much has been written and said, about "Improved Short Horns," that there is little to be given by me in their praise, but the results of my immediate observation. I had ample opportunities abroad, I have most sedulously availed myself of all the means within my reach at home, to obtain accurate information on the comparative merits, of the various breeds of neat cattle, of which we are possessed. I control more than a thousand acres of alluvious meadow, as well as many farms, and large bodies of wild lands, in Pennsylvania, New York, and Maine. I am thus led to mingle with farmers both in this and in other states, to examine their cattle, and ascertain their properties, as well as the products of the soil; whilst my own farm enables me to prosecute any system of experiments, which I may be led to attempt I have had cattle bred in Kentucky, Maryland, Virginia, Maine, Massachuseets, Vermont, New York, and Pennsylvania. I have traced every importation, of which I had heard. I can distinguish Mr. O'Donnell's, Patterson's, Gough's, and Parkinson's importations for Maryland—the Holstein, *Alderney*, Irish, Dutch, Flanders, Brittany, Pole and Short Horn breeds brought into Pennsylvania by Mr. Sims, Cunningham, Ross, Waln, Hamilton, Kettland, Guest, and Haines: the families of various degrees of affinity, to the pure race of "Short Horns," carried to New York by Col. Deveaux, and Mr. Heaton—the Leicestershire, Lancashire, and Hereford cattle, taken to Connecticut, Massachusetts and Maine, by Mr. Wadsworth, Stewart and Vaughan. Of most of these importations I have had individuals, and of all, have carefully examined some of the progeny, either here, or at a distance.

I have possessed an hundred and fifty cows, calves, bullocks, and bulls within three years. I am a member of the society of learned farmers, I have attended cattle shows without number, I have read "Albion," "the Memoirs," and I reside near farms to "large dairies devoted:" thus without boasting of my brilliant accomplishments, or elaborate acquirements, in all that relates to the *tail of a sheep*, the buttock of a bull, or the bag of a cow, I may venture to state what I, and my cattle have done.

For some animals of the breeds, which I designate, I had given great prices; yet the best of them all, I sold for but sixty dollars a head, about the time, I gave nearly five hundred dollars for two imported "*Improved Short Horn*" *cows*—and from Mr. Williams of Massachusetts procured eighteen or twenty yearlings, and calves by his extraordinary Bull Denton. I have since obtained, three imported heifers; for one of them by North Star from a cow by Comet, I paid in England five hundred dollars. Among my stock a Chinese and Devon heifer, a yearling and cow from an imported Devon, by an English bull, also heifers, and cows bred upon our meadows and mountains have been placed, to decide the questions, which have caused among breeders so much dispute. All my experience has shown, that the extent of excellence in the animal, whether *in points, properties, shape, disposition, early maturity, or tendency to secrete fat, or afford* rich milk is determined, by the degree of affinity to the *pure race of Improved* Short Horns. That my Durham cows are deep milkers, that they are *hardy*,* have elastic pliant hides with thick soft coats, that when dry, they are easily made fat, that whilst yielding milk, they become thin, has been proved to my entire conviction. Might not "Albion" be asked whether he did not forget, that although it is difficult to "blow hot and cold at the same time," that it is possible to blow hot in June, and cold in January. The tendency towards fat, proceeds, I should presume, from the power of the animal's stomach, and intestines to separate the nutritions, from the excrementitious parts of its aliment. Nature wisely destines certain portions of nutritious matter at proper times, for the secretion of milk—that milk is an unctuous, and very nutritious fluid, cannot be questioned—much therefore of nutrition is withdrawn by the milk from the formation of fat—but does it follow, that such portions as have made butter, *or produced fat in the calf*, when no longer directed towards the secretion of milk, must necessarily lose all their properties, and pass off in urine or in dung? Do we not invariably find, that all cows when dry become more readily fat than when they give milk? Is it not to be inferred that the matter which would have passed off in milk, *may* be made to produce fat? Does not our experience show in all families of wild cattle, where the perverseness of man has not interfered with the dispositions of nature, that when kept quiet, and well fed, they exhibit great tendency towards secretions of fat. In the cattle even of Asia and China, in the Kyloes of Scotland, in the wild breeds of Louisiana, and in the little mountain cows of America, such disposition is generally shown.

The mistaken ingenuity of the breeders of Holland, whence all the deepest milkers, whether Holderness, "Old Short Horns," Holstein, or whatever they may be termed in America, are in some measure derived, carried them into an absurd "cross," affording excessive secretions of bad milk; thus not only prematurely exhausting the animal by which they are given, but at all times requiring great quantities of food for her support. That disease, peculiar tendency *towards fatness, or leanness*, or copious supplies of thin, or lesser quantities of rich milk, or even the determination of a particular color, towards any definite part of the body, as white at the end of a Devon's tail, may be established by perseverance, and art, every man conversant with the subject, will readily believe. Because a Dutchman chooses to wear out his cow, or have a race of animals, which will not readily become fat, even when dry; and the cupidity of the venders of milk in the neighborhood of large towns in England, or America, has led them to propagate this unthrifty breed of cattle, is it to be inferred, that the efforts of Collings, and his coadjutors, could not obtain by crossing a family, which are fitted *at different times for the production of milk, and secretion of fat.*

Yours, &c.

CURWEN.

Philadelphia County, April 10th, 1823

Murray's System of Chemistry, says "the blood is a compound of this kind," &c. "and it "we suppose a fluid thus passing through tubes of "different diameters, and undergoing successive "decompositions, we may easily conceive that very different products may be formed from the "same original compound. This affords a simple "view of the nature of secretion. No complicated "apparatus is requisite for the performance of the "change, all that is necessary being the propulsion "of the blood through minute vessels, capable of "contraction. It has accordingly frequently been "observed, that new products are formed without "the intervention of glands; such is the formation "of the fat or of the muscular fibre. It is easy to "conceive that the formation of these may take "place in the extreme vessels, where these products are deposited; and in like manner, in the "mere course of the circulation, may be formed the "gluten, albumen, and other principles of the blood "itself. From secretion a variety of products are "formed, as the bile, milk, fat, the bony matter, "the matter of membranes, and a variety of others. "These complete the formation of animal matter, "and comprehend its several varieties. Such are "the different steps of the process of animalization. "The food is digested in the stomach, mixed with "animal matter in the intestinal canal, and converted into chyle: this mingles with the blood, and "loses a portion of carbon in the lungs: in the extreme vessels it is converted into the general "principles of animal matter; and in the glands, "is converted into various secreted products."

White, vol. 4, chapter 1. of the formation of the digestive organs of the cow, page 13. "The "stomach then may be considered both as a muscular and as a vital organ. If we view it in another "light we shall consider it as one continued bibulous surface, sucking up the chyle as it is formed, and conveying it by means of the milk-vessels "to the four receptacles which are named the quarters of the udder. There is another order of absorbent vessels in the stomach, and in the small intestines also, especially in the upper part, named lacteals, which ramify through the mesentery, and terminate in the thoracic duct, having previously passed through what are named "the mesenteric glands; that is for the most "part, for some are seen going over their surface. "These lacteals are subsidiary, and occasional "in their office, serving to convey chyle when "the mesenteric glands are inflamed and obstructed. Chyle, as we find it in the lacteals, is exactly like milk in every respect, and is, in fact, the "same thing. The fluid of the thoracic duct is "different; it is semitransparent, has always a "little oil floating on it, and is now and then "found mixed with a little blood, which probably falls into it after death, from the great "vein in which it terminates. This depends "on the value of that part giving way, in consequence of death. Chyle and milk are then "precisely the same thing; and in the cow there "are three thoracic ducts, two going to the udder and conveying milk, and one to a great "vein near the heart, conveying that fluid from "which the blood is formed When the animal "has young, the lactiferous vessels, for so the "minute branches of the two former thoracic "ducts should be named, have a predominant aptitude to absorb the chyle, and a sufficient quantity only is taken up by the chyliferous vessels "going to the third thoracic duct to supply the "heart."

Note.—The Editor takes the liberty of adding the following extract from a letter from Col. Edward Lloyd, speaking of the Improved Short Horns, Champion, Shepherdess and White Rose—sent in by Mr. Charles Champion of Blythe, Nottinghamshire, England.—Col. Lloyd observes "I found Champion and the heifers in fine order on my return; they were, and still are too fat. I assure you that Shepherdess reduces *but slowly*, although I feed her alone on *corn tops*—and Champion is still too fat, although I have reduced his feed to a half gallon of meal per day. Their *fattening qualities* far exceed my expectations, and are almost incredible."

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* The hardiness of this breed of cattle, was forcibly evinced, on the estate of a scientific and eloquent agriculturist, who in his contempt of the old fashioned mode of delving, and ploughing the earth, unluckily left his barns without fodder, and his fields bare of grass, to the great mortification of himself in the last spring, when he emerged from his closet, and discovered that his schemes had all failed, and his cattle had starved, except those of pure "Improved Short Horn" blood.

From Phillips' History of Cultivated Vegetables.

FLAX, OR LINE.—LINUM.

Natural order, Grecinales. A genus of the Pentandria Pentagynia class.

The Greeks called this vegetable *Λίνον*, and the Latins had no other name for it than *Linum*, both in its growing state and when prepared for the spinner; hence the Italians and Spaniards have derived the word *Lino;* and the French, *Lin.* The ancient Britons called it Lyne from the same source. The word Flax is derived from the Saxon *Fleax*, or *Flex;* but we still term it Linseed and Linen cloth, although when speaking of the plant we call it Flax.

We know twenty-two species of Linum, four of which are said to be indigenous to our soil.

The flax is scarcely superior in appearance to the common grass; yet on no other vegetable has the ingenuity of man been so extensively employed, or exerted with such success.

Without the aid of flax, this island might have remained unknown and unpeopled. Its assistance enabled the European sailor to discover a new world, and people to whom we must have remained strangers but for the fibres of this herb, and from whose territories we have since enriched our isle with the most useful roots, the most luxurious fruits, and ornamental plants. It was with flax that we first made wings to our vessels, with which we travelled with the swiftness of the eagle, and extended our commerce to the most distant parts of the globe.

Dædalus is said to have been the inventor of sails for ships, by which he fled from Crete, to escape from the revenge of the incensed Minos, who had condemned him to be confined in the labyrinth which he had constructed. Dædalus arrived safe in Sicily, where he was hospitably received by Cocalus, king of that island. From this circumstance the ancient allegory states, that he made himself wings. This was at least 1350 years before Christ; and we find that sails were certainly used before Homer's time, who says

——"the winds aloud
Howl o'er the masts, and sing through every shroud."

At that period the use of hemp was not discovered

Flax is a slender plant, that seldom exceeds two feet and a half in height. From its fibrous bark we procure the comfort of linen, and the beauty of lace; its very rags are manufactured, into the most exquisite of all our luxuries, viz. the paper that enables distant friends to hold converse, and communicates the wisdom of the learned of every age and language.

How the fibrous qualities of this plant were first discovered, it is beyond the powers of research to ascertain; probably the earliest use of this pliable plant was to twist into bands for the purpose of attaching productive vines to unfruitful trees. Thus Milton describes the employment of our first parents:

——"or they led the vine
To wed her elm; she 'spoused, about him twines
Her marriageable arms, and with her brings
Her dower, adopted clusters, to adorn
His barren leaves." *Book 5.*

As man multiplied, the necessity of ensnaring wild animals and securing domestic ones, would naturally call his attention to the formation of a cord; and when once a band was formed of the whole plant, it would easily be discovered that the fibres were the part that afforded the strength.

When New Holland was first discovered, it was observed that the natives, who subsisted principally on fish, had invented a kind of net made of the fibres of flax, by inserting the loops into each other without a knot; yet these people had not the least idea of forming a covering, even to protect themselves from the inclemency of the weather, and were so barbarously ignorant as not to have the least knowledge of the art of cultivating plants or fruits of any description.

The making and use of linen cloth appears to have been invented previously to the Deluge, as we read that Noah slept in a tent.*

Egypt, which appears to be the country that Ham, the second son of Noah, resorted to, from its being called in Scripture, the Land of Ham, soon became the garden of the East, and the seat of arts.

"Israel also came into Egypt, and Jacob sojourned in the land of Ham."†

Ham is supposed to have led a pastoral life, but his son Mizraim, who is mentioned in profane history by the appellation of Menes, assumed the style of king, and built the town of Memphis. His wife Isis, whom some suppose to be the same as Io, is said to have taught the art of agriculture, and employed herself diligently in cultivating the earth, for which she was deified, and the worship of Isis became universal in Egypt. The priests of this goddess were clothed in *linen* garments.

About 300 years after the flood, Abram and his family went into Egypt to avoid the famine; and on their return the following year, the book of Genesis notices, that Lot, the nephew of Abram, had flocks and herds, and *tents.*

Pharaoh arrayed Joseph in vestures of fine linen: and when Moses called down the plague of hail upon Egypt, it destroyed the flax.

"And the flax and the barley was smitten; for the barley was in the ear, and the flax was bolled."‡

That the art of weaving had attained a wonderful perfection in Egypt in those days, we learn both from profane and sacred history.

The Israelites appear to have carried the art with them when they were delivered from bondage; for they were commanded in the wilderness to make offerings for the tabernacle, of "blue, and purple, and scarlet, and fine linen, and goats' hair."

"Thou shalt make the tabernacle with ten curtains of fine twined linen, and blue, and purple, and scarlet: with cherubims of cunning work shalt thou make them."§

In the 28th chapter of the same hook, we have a description of the holy garments for Aaron, which were of fine linen. "And thou shalt embroider the coat of fine linen, and thou shalt make the mitre of fine linen, and thou shalt make the girdle of needle-work."

"And all the women that were wise-hearted did spin with their hands, and brought that which they had spun, both of blue, and of purple, and of scarlet, and of fine linen. And all the women, whose heart stirred them up in wisdom, spun goats' hair."‖

Egypt continued to be celebrated as the country of flax and linen in the days of Solomon, whose merchants traded thither nearly a thousand years after the time that Abram visited that land.

"And Solomon had horses brought out of Egypt, and linen yarn: the king's merchants received linen yarn at a price."¶

"I have decked my bed with coverings of tapestry, with carved works, with fine linen of Egypt."*

The prophet Isaiah notices this manufacture of the Egyptians, about 250 years later than Solomon. This prophet menaces Egypt with a drought of so terrible a kind, that it should interrupt every kind of labour.

"Moreover, they that work in fine flax, they that weave net-works, shall be confounded."†

Ezekiel the prophet, in his description of the riches and the merchandise of Tyre, speaks of the productions of Egypt, about 150 years after Isaiah.

"Fine linen with broidered work from Egypt was that which thou spreadest forth to be thy sail.‡

From the Egyptian linen, the principal garments of the priests of the heathens, as well as those of the Israelites, were formed. The Eastern kings and princes were also habited in linen, therefore flax formed a considerable branch of the trade of Egypt; and their method of making fine linen, was carried to such a wonderful perfection, that the threads which were drawn out of them were almost imperceptible to the keenest eye. Pliny states, that some of the thread made from flax was finer and more even, if possible, than the web of a spider, and yet so strong, that it would give a sound nearly as loud as a lute-string. This author states in the first chapter of his nineteenth book, that he had seen an Egyptian net made of so fine a thread, that, notwithstanding every cord in the mesh was made of 150 threads twisted, yet it could be drawn through the ring of a finger. "I have known," says this writer, "one man who could carry about as many of these nets, as would encompass a whole forest." He adds, that Julius Lupus, who was governor of Egypt, possessed one of these nets, but that the most extraordinary net-work was that which was shewn in the temple of Minerva, in the Isle of Rhodes; every thread of which was twisted 365 times double, agreeably to the number of days in the year. This singularly curious piece of workmanship had formerly belonged to Amasis, who from a common soldier became King of Egypt, about 526 years before the Christian æra.

The author has now in his possession a piece of linen cloth, which was woven in Egypt as long back as the Trojan war. It will naturally be surmised, that it is a part of the envelope of a mummy. In comparing this cloth to that of our linen of the same fineness, and examining them through a microscope, it is observed, that the warp of the ancient linen is not so close as that of the present make, but that the woof is pressed much closer: it would consequently be more durable, wear softer, and be less susceptible of soil, than modern linen cloth.

The Athenians, who were an Egyptian colony from Sais, followed the custom of their ancestors, by applying themselves to raising flax for linen cloth: they therefore worshipped Minerva, who was also styled *Ergatis*, or the workwoman, for her excellency in spinning and weaving; and who is supposed to be no other than the Egyptian Isis; for the Egyptians, to remind the people of the importance of their linen manufactory, exposed in their festivals an image, bearing in its right hand the beam or instrument round which the weavers rolled the warp of their cloth. This image was called Minerva, from *Mancvra*, a weaver's loom. The name of *Athene*, that is also given to this goddess, is the very word denoting in Egypt the flaxen thread used in their looms. Near this figure, which was intended to warn the inhabitants of the approach of the weaving or winter season, they placed another of an insect, whose industry is supposed to have given rise to this art, and to which they gave the name of Arachne, (from *arach*, to make linen cloth) to denote its application. All these emblems, transplanted to Greece, were by the genius of a people fond of the marvellous, converted into real objects, and indeed afforded ample room for the imagination of their poets to invent the fable of the transformation of Arachne into a spider. Ovid, who has set this story in a beautiful light, says, Arachne was

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* *Gen. c.* ix. *v.* 21.
† *Psalm*, cv. *v.* 23.
‡ *Exodus*, *c.* ix. *v.* 31.
§ *Exod. chap.* xxvi. *v.* 1.
‖ *Exod. chap.* xxxv. *v.* 25, 26.
¶ 1 *Kings*, *chap.* x. *v*, 28.

* *Proverbs*, *chap.* vii. *v.* 16.
† *Isaiah*, *chap.* xix. *v.* 9.
‡ *Ezekiel*, *chap.* xxvii, *v.* 7.

"One at the loom so exquisitely skill'd,
That to the goddess she refused to yield.
Low was her birth, and small her native town,
She from her art alone obtained renown.

* * * * * * *

"Oft to admire the niceness of her skill,
The nymphs would quit their fountain, shade or hill."

After Minerva had accepted the challenge of Arachne, the poet thus elegantly describes their work:

"Straight to their posts appointed both repair,
And fix their threaded looms with equal care:
Around the solid beam the web is tied,
While hollow canes the parting warp divide;
Through which with nimble flight the shuttles play,
And for the woof prepare a ready way;
The woof and warp unite, press'd by the toothy slay.
Thus both, their mantles button'd to their breast,
Their skilful fingers ply with willing haste,
And work'd with pleasure: while they cheer the eye
With glowing purple of the Tyrian dye:
Or, justly intermixing shades with light,
Their colouring insensibly unite.
As when a shower transpierced with sunny rays
Its mighty arch along the heaven displays;
From whence a thousand different colours rise,
Whose fine transition cheats the clearest eyes:
So like the intermingled shading seems,
And only differs in the last extremes.
Then threads of gold both artfully dispose,
And, as each part in just proportion rose,
Some antique fable in their work disclose."

The Greeks made a linen of so fine a fabric, from the flax which they cultivated near Elis, (Now Belvedere,) that it sold by weight at the price of gold. This is the flax which Pliny calls *Byssus*, and from which a kind of lawn or tiffany was made. The same author says, a flax is now found out which will not consume in the fire; this he calls living flax, and says, he saw at a great feast, all the table-cloths, napkins, and towels, thrown into the fire, which received a cleanliness and lustre from the flames, which no water could have given it. This kind of cloth was used at the royal obsequies and funerals, to wrap round the corpse as a shroud or sheet, in order to preserve the ashes of the body, from mixing with those of the wood of the funeral pile. Pliny adds, that this flax grew in the deserts of India, where the country is parched and burnt with the sun: he says, it is difficult to be found, and as hard to be woven, being in short fibres. In its natural state, the colour was reddish, hut by burning it became bright: it was esteemed as precious as oriental pearls. It does not appear by this account, that the Romans were acquainted with its being a mineral substance.

The art of making this fossil linen is nearly lost, although John Baptist Porta, the inventor of the camera-obscura, assures us, that in his time (from 1445 to 1515) the spinning of asbestos was a thing known to every body at Venice; and it is said to be still in use by the Princes of Tartary, in burning their dead.

A handkerchief made of this substance, which Dr. Plot judges to be of a nature between stone and earth, was long since presented to the Royal Society of London. This has given several proofs of its resisting fire; and when taken out red hot, it did not burn a piece of white paper, on which it was laid.

The asbestos is found in the island of Anglesey in Wales, and in Aberdeenshire in Scotland, in some parts of France, in Tartary, Siberia, and several other places; and were there a demand for this incombustible cloth, or a price given equal to the trouble of manufacturing it, we soon should recover the art, and have it on sale in the shops of our metropolis.

But to return to flaxen linen: by looking back into history we shall find, that it was used for other purposes than garments at a very early period; for the stupendous temples of the heathens, and the courts of their palaces in ancient times, were open buildings surrounded with massy columns, and ornamented with gigantic statues of their gods, and colossal figures of their inferior deities. In these immense courts not only the inhabitants of a whole city, but often an entire kingdom assembled, to celebrate a festival, or to obey the mandate of their sovereign. As the art of weaving became more known, these gorgeous edifices were occasionally hung with rich curtains of linen cloth, to shade and protect the guest from the sun or weather. The first chapter of the book of Esther describes the feast which King Ahasuerus gave in the third year of his reign to all the princes and servants of the 127 provinces over which he reigned, from Ethiopia to India. This feast lasted 180 days, at the expiration of which he feasted all the people that were in Shusham, "both great and small," for seven days, "in the court of the garden of the king's palace," where were white, green, and blue hangings, fastened with cords of fine linen and purple, to silver rings and pillars of marble.

The Romans appear to have derived this idea from the Egyptians, as Lentulus Spinther was the first who caused the great amphitheatre at Rome to be covered with fine curtains. This was about the period when Antony was in Egypt: and Pliny observes, that the sails of the ship in which Antony and Cleopatra came to Actium, were dyed purple.

Julius Cæsar caused the Forum at Rome to be covered with fine curtains: as also the whole of the principal street called Sacra, from his own dwelling to the cliff of the Capitol. This sumptuous sight, says Pliny, was beheld with great wonder and admiration.

Marcellus, during his Ædileship, upon the calends (or first) of August, caused the roman Forum to be hung and canopied with curtains, that those who came to plead at the bar might stand under the shade. "What a change," says Pliny, "since the days of Cato the Censor, who advised that the said Forum should be paved over with *caltrops*, to keep away the lawyers and busy pleaders."

Nero caused the amphitheatre to be covered with curtains of a sky-blue, spangled with stars.

We now see the rustics of our own country enjoying their pipe and their ale beneath the linen canopy in a rural fair, as proud of their liberty as the Eastern monarchs were of their temples, or the Romans of their dictatorship.

"'Tis liberty that crowns Britannia's isle,
And makes her barren rocks and her bleak mountains smile."
ADDISON.

Spain was celebrated for her manufactory of linen as early as the birth of Christ. The Spaniards were the inventors of fine Cyprus or clear lawn, which was made from the flax of Arragon and Catalonia. France then produced a flax from which sails were made: Holland and Flanders produced linen cloth at the same period. The Germans of those days carried on the spinning and weaving of linen in vaults and caves under ground, which was also the practice of the people of Lombardy in the time of Pliny.*

The fine muslins of the East Indies were also made by persons kept under ground, who were never allowed to see the light. Children were entombed from their infancy in these dark abodes, in order to gratify the vanity of the wealthy with a finer thread than could be drawn by the eye that was blessed with the sight of day. Our East India Company has suppressed this subterraneous weaving. The art is now happily lost, and no Christian can wish its revival.

Linen was not worn by the Hebrews, Greeks, or Romans, as any part of their ordinary dress: their under-tunics were made of fine wool or hair; and hence arose the occasion for frequent bathing. It has been observed that the introduction of linen shirts has been found to lessen the prevalence of leprosy.

The Emperor Alexander Severus, who was murdered in the year 235 A. D. was the first person who wore a linen shirt: but the general use of so necessary a garment did not become common till long after him.

The making of linen cloth in England was probably introduced by the Romans, who certainly cultivated flax in this country.

Before Britain had become so great a commercial nation, each town or village had its weaver, and every good housewife was expected to furnish her family with linen of her own spinning. The farmer's daughters were early instructed in this art, and their female domestics filled up all their vacant hours at the distaff or wheel. Tusser, in his advice to the farmer, for May, says,

"Good flax and good hemp, for to haue of hir owne,
In May a good huswife wil see it be sown:
And afterward trim it, to serue at a need,
The fimble to spin, and the carle for his seed."

In the same author's directions for July, he says,

"Now pluck up thy flax, for thy maidens to spin,
First see it dried, and timely got in."

Flax has for many ages employed and enriched the French nation. Their city of Cambray first manufactured that beautiful linen called from thence Cambric, for the purchase of which, England for many years contributed not less than £200,000 per annum.

In the reign of George the Second, several salutary laws were enacted to prevent, this great loss of our wealth; and an Act passed in the 4th of George the Third, c. 26, to regulate the cambric manufactory, not long before introduced into Winchelsea in Sussex, but which soon failed, and was abolished. Laws have been made to prevent the selling and wearing of French cambrics and lawns in England, but which have only established their fame as being superior to our own.

The fine fibres of this plant have also afforded the French, as well as the Flemings, a valuable article for commerce in their lace of Brussels, Valenciennes, Lisle, Mechlin, Normandy, &c. Our legislators have laid heavy fines and duties to prevent the importation of this article of luxury, but with little success, for while it is admitted at court, it will naturally be seen in private society. Flax is not known in China.

From the seeds of this vegetable is drawn linseed oil, so useful to our house painters and other artists.

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* *Book* xix. *c.* 1.

"Whether their hand strike out some free design,
Where life awakes, and dawns at every line,
Or blend in beauteous tints the colour'd mass,
And from the canvass call the mimic face."

POPE.

The seeds are esteemed an excellent emollient and anodyne: they are used externally in cataplasms, to assuage the pain of inflamed humours: internally, a slight infusion of linseed, by way of tea, is recommended in coughs as an excellent pectoral, and of great service in pleurisies, nephritic complaints, and suppressions of urine. Cold-drawn linseed oil is of great service in all diseases of the breast and lungs, as pleurisies, peripneumonies, coughs, asthmas, and consumptions. It likewise helps in the colic and stone.*

In pleuretic pains, says Raygerus†, I have often experienced linseed oil to be the most successful medicine I could prescribe; for it immediately facilitated respiration, and promoted spitting. In hæmoptoe, also, I exhibited the same oil with the desired success; for, by its balsamatic and emplastic virtue, it consolidates the affected parts.

The oil, boiled with honey, clears the face and skin of spots, and all cutaneous blemishes.‡

Linseed oil consists of parts so subtile, that it cannot be kept in earthen vessels, without transudation.

The lint made from linen rags has ever been in great use in surgical cases, from its softness, smoothness, and flexibility; whereas that made from cotton can never be used about wounds, on account of its denticulated parts, which dispose to inflammation.

Formerly the seed of the flax was occasionally used with corn to make bread, but it was considered hard of digestion, and hurtful to the stomach. In a scarcity of corn which happened in Zealand in the sixteenth century, the inhabitants of Middleburgh had recourse to linseed, which they made into cakes, and which caused the death of many of the citizens who ate it; causing dreadful swellings of the body and face. Pliny informs us, that the peasants in Lombardy and Piedmont had formerly used as food, a sweet kind of bread or cakes made from this seed, but which in his time was only used in their sacrifices to the gods.

The quantity of linseed annually imported into these kingdoms, was, in the year 1780, estimated to be not less than 240,000 bushels.

There is an act of parliament now in force, which forbids the steeping of flax in rivers or any waters where cattle are accustomed to drink, as it is found to communicate a poison destructive to the cattle which drink of it, and to the fish in such waters.

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From the last Pamphlet published by the Essex Agricultural Society.

COLONEL PUTNAM'S FARM.

Col. Jesse Putnam's farm is situated in the North Parish in Danvers, about six miles from Salem. It contains about 114 acres; to wit—44 of tillage—40 of pasture—and 18 of wet or low-ground meadow. His wood land is not in Danvers.

Most of his tillage land is covered with orchards of apple trees; of which about 1200 are large enough to bear fruit; and 400 have been planted, or grafted, from two to six years. He raises his own trees in nurseries; which he renews from time to time, to supply his own wants. He considers the spring the best time for transplanting trees. In this operation he digs the holes four or five feet in diameter, and two feet deep: into which, in planting the tree, he introduces rich soil, that the tree may sooner recover from the check it receives in the transplanting.* By giving such dimensions to the holes, the roots may be regularly spread out in every direction, without being crowded. He disapproves of making nurseries in very rich soils; because they will generally be transplanted to poorer soils, and so be sensibly and injuriously checked in their first growth. He thinks it better to transplant from a poor to a rich soil, than from a rich to a poor one. Most of his trees are grafted with winter fruit. In selecting his fruits, he is careful to choose the kinds that are good bearers, as well as of good qualities; grafting over again, with other fruits such trees as are not sufficiently productive. Col. Putnam has found it beneficial to young trees, to wash them in the spring with a composition of lime, clay, fresh cow dung and water; as it removes the moss, destroys the insects that find harbours in the rough bark, and gives a smooth, vigorous and lively appearance to the trees. He has found it serviceable to vary the manures applied to his trees, according to the nature of the soil. He has frequently sown barley, or other grain, around them, and when 18 or 20 inches high dug it in. This he has thought one of the best modes of manuring them; and (as well as every other way of manuring) should extend to three or four feet from the tree, all round; continuing this practice at least until the trees have attained a good size, and are in a good thriving and bearing state.

For several years past, he has annually broken up three or four acres of his pasture land where principally covered with small bushes and moss, and planted the same with potatoes or corn; and when laid down to grass found himself amply compensated.

It has been his practice to plough, in the warm weather in August, the land intended to be planted the ensuing spring; at which time it is cross-ploughed. By ploughing when the earth is warm, he says, the sod is better rotted, and more easily rendered fit for tillage crops. Ploughing late in autumn he thinks not advantageous. Thus cultivated one or two years, the land will be in a good condition for English grain and grass. The same land will need to be broken up again, as often as once in six or seven years.

"The raising and curing English hay (he remarks) occupies a large portion of our time; and rewards our labour as well as any thing that is done on the farm: and the object of cultivating other crops is, in a good degree, to prepare the land for this most important crop.

The produce of his farm, in 1821 and 1822, as near as he could estimate the same, he states as follows:

	1821.	1822.
English Hay	24 tons	30 tons
Oats for fodder	3 do.	4 do.
[Wet] Meadow Hay	8 do.	7 do,
Barley for fodder	0 do.	3 do.
Indian Corn	70 bush.	150 bush.
Potatoes	800 do.	300 do.
Barley	70 do.	cut for fodder.
Onions	0 do.	150 bushels.
Carrots	40 do.	90 do.
Turnips	20 do.	150 do.
Cabbages	10 doz.	30 doz.
White Beans	2 bush.	7 bush.
Green Peas for market	4 do.	50 bush.
Summer Apples	130 do.	150 do.
Winter Apples	600 do.	600 do.
Pork	2000 lbs.	2000 lbs.
Pumpkins	2 tons.	4 tons.

He kept no particular account of his dairy but his cows, six in number, had done well.

Col. Putnam's mode of making manure, he states as follows:

"In the autumn I clear the barn-yard, and carry the manure into large and compact heaps, in the fields where it is intended to be used. The yard is then covered with turf, loam, or pond mud, and such other materials as are found on the farm, suited to making manure. These, together with the droppings of the cattle in the winter and summer, and the relics of their fodder, are mixed together in the course of the summer, and made into fine manure. This I use principally on my grass land; spreading it from the cart, after the grass is grown several inches.

"I have a cellar under my barn, in which the winter dung and urine of the cattle are collected. By mixing with these, in the cellar, meadow turf (or sod) coarse hay and corn stalks, the quantity is much increased. I also carry large quantities of materials to my hog pen, which is so situated as to be kept moist; and from the industry of the swine in preparing this manure for the field, I find more benefit from them than in any other way."

His usual stock consists of six oxen, eight cows, one bull, two horses, and several extra cattle to be sold in the spring, and from six to twenty swine.

Col. Putnam closes his statement as follows:

"Some of my [wet] meadows have been converted into excellent English mowing grounds, by carrying about six inches of gravel on to them in the winter. In the first place I divide a meadow into lots about three rods wide, by ditches—turning the turf bottom upwards—and taking care to have the middle of the lots the highest, so that they may be a little sloping towards the ditches. Plough the turf and gravel together, in the spring, and plant it one season with potatoes: the crop will be as good as in common fields. Then carry on one or two inches of top soil, and a good coating of manure; and from land thus prepared, I have obtained my largest and best crops of English hay."

* * *

Were it even practicable to insert the proceedings of all the Agricultural Societies, there would be found in them so much sameness, as to render such a step uninstructive and inexpedient. Still it gives us pleasure, when we can, to record the incipient measures, relating to the formation of Societies, and the first proceedings which serve to shew that the zeal which created them is fairly in operation—producing beneficial effects to Society. In this light we view, and for this reason we now insert, the auspicious commencement of an association at Pittsburgh, under the Presidency of Judge Wilkins, an eminent civilian, deservedly amongst the most popular citizens in Western Pennsylvania.—*Edit. Am. Far.*

ALLEGHENY COUNTY AGRICULTURAL EXHIBITION AND FAIR.

In conformity with an Act of the Legislature of Pennsylvania, the first annual meeting of the "Society for the promotion of Agriculture and Domestic Manufactures, in and for the county of Allegheny," was held on Monday the 28th inst. at the town of Allegheny, opposite Pittsburgh.—The Society occupied the public grounds in the centre of the village, on one side of which enclosures were prepared for sheep and swine, and a temporary building erected for the exhibition of domestic manufactures.

At 12 o'clock, the business of the day being opened by the Rev. Mr. Stockton with an appropriate prayer, William Wilkins, Esq. the president, delivered an interesting address, in the presence of a great concourse of citizens who attended from all parts of the county, notwithstanding the unfavourable weather.—After which the committees for the examination of the different subjects proceeded to discharge the duties assigned them.

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* *James.*

† *Germ. An.* 6 & 7.

‡ *Hist. Plant. ascrip. Boerhaave.*

§ *In planting trees, the roots should be covered with earth at no greater depth than before their removal.*

The following list of Stock and Domestic Manufactures, were exhibited:

STALLIONS.

North Star, dark bay,	by D. Phillips, St. Clair
Jolly Farmer,	by Wm. Wilson, Elizabeth
Stallion	by John Fife, St. Clair
Ditto	from Westmoreland county, much admired, and pronounced to be the best.

BROOD MARES.

Dun,	by Wm. Wilson, Elizabeth
Dark bay	by Samuel Ewalt, Pitt
Messenger,	by Ch. H. Israell, Mifflin
	by Richard M'Clure, Elizabeth
Grey,	by —— M'Fadden, Robinson

COLTS.

Dark Chesnut,	2 years old,	H. Hultz, St. Clair
Sorrell,	18 mo's	Jno. Morrow, do.
Bay	do.	George Wallace, Wilkins
Blooded Colt, Consul, (from Messenger and horse Consul)	2 years old,	Ch. H. Israell, Mifflin
Colt,	3 do	S. Sinclair, Elizabeth
Filley		Adam Coon, Versailles

NEAT CATTLE.

Bull	by Chr. Cowan, Fayette
Ditto	Geo. Wallace, Wilkins
Ditto	James Gray, Ross
Bull Calf, under 2 years old,	by do. do. do.

Cows.

Milk Cow	Wm. B. Foster, Pitt.
Hiefer	Wm. Robinson, Jr. Ross
Cow and Hiefer,	James Gray, do.

These cattle of Mr. Gray, are of a very superior size and form, and exhibit strong marks of a stock of imported neat cattle.

A pair of Calves, yoked, well matched and tractable, were exhibited by Wm. Montgomery, of Ross.

Swine.

1 Sow	R. Sylvester, St. Clair
1 do.	Zenos Neal, Pittsburgh
1 do. with 4 pigs,	James Miller, Ohio
1 Boar	Robert Hays, St. Clair
1 Pig 16 mo's. old,	wt. 218 lbs. A. Beelen, Pittsb.
Pigs	Alexander Hill, Pitt

Sheep.

Merino Buck	Jacob L. Glaser, Pitt
Ewes	Ditto do

DOMESTIC MANUFACTURES.

1 piece Linen Shirting 30 yards, Mrs. Geo. Wallace, Braddock's Field
1 ditto 31 yards ditto do
3 ditto do. 73¾ yards, J. Melvin, Ross
1 ditto do. Miss Snodgrass, St. Clair
1 ditto do. Mrs. M. Fleming, Wilkins
1 ditto Flannel 24 yards Miss A M'Clure, Miff.
1 ditto do. Mrs. Chess, Ross
1 ditto do. 30 yards, Mrs. Bat. O'Hara, Ind.
1 ditto do. and 2 Coverlets, Mrs. Sample, Ross
3 ditto Woollen Cloth 3-4 wide, Wm. Arthurs, St. Clair
1 ditto Lindsey 31 yards, John Hodge, Pittsburg
1 ditto Birdseye, Miss Cowles, do
1 ditto Carpeting 40 yards, Mrs. Jno. Irwin, Ross
1 ditto do. Miss Chess, St. Clair
1 ditto do. A. Lee do
1 ditto do. Isaac Harris, Pittsburgh
1 ditto do. Mrs. Darlington, do.
2 ditto do. Mrs. Stockton, Ross
1 ditto do. John Hodge, Pittsburgh

The pieces of Carpeting exhibited, were all fine specimens, both as to color and texture, and much admired.

Blankets Mrs. O'Hara, Pittsburgh
Ditto Mrs. J. Irwin do
3 prs. Woollen Socks and Stockings, Mrs. M. M'Donnel, St. Clair
4 do. worsted Cotton ditto, Mrs. Habbet, Pittsb.
1 do. Stockings and 2 pr. Socks, of Thread, knit by Mrs. Jane Davis of Ross, aged 71.
1 do. Woollen Stockings, Miss Cowles, Pittsburg
2 do. Socks and Stockings, Susanna Reese, Wilkins
2 Bonnets of split Straw by Mrs. Sheppard, Pittsburgh
1 do. do. Miss Petar, Ohio
1 do. do. and Hat Mrs. Miller, Indiana
1 do. imitation of Leghorn, Miss M'Clean, St. Clair
1 Hat Mrs. Mary J. Hays, Mifflin

Miss Weigly of Hempfield township, Westmoreland county, exhibited 2 elegant Bonnets of her own making, which rivalled in fineness and beauty, the best Leghorn.

Mrs. Mowry, of Pittsburgh, exhibited a very handsome piece of Table Linen.

Mr. Parsons, Razors and Pen-knives of his own manufacture.

Hugh M'Masters, several pieces of Cassinet and Cotton Cord.

Isaac Harris exhibited several pieces of Steubenville Cloth, and also several pieces of Philadelphia manufactured Calicoes, which were superior in every respect to imported goods at the same price.

Miss Mary Ann Irwin of Franklin, Venango, exhibited a white Cape, made from Goose-down, which was much admired.

Mr. Matthews, a very handsome Saddle of peculiar workmanship, which sold for $45.

George Evans had on the ground, an elegant Plough, of Woods' patent—also a Corn-sheller.

An Axe made by Wm. Montgommery, and a horse shoe, made of Union Rolling-mill Iron.

Nails, by Richard Bowen; weight 90 pounds, 600 nails in each pound, and made in 6 hours at his factory.

Locks and Latches, by Jas. Patterson, of Birmingham.

Handsome Japanned Waiters and Trays, made by John Whitaker, Grants Hill, Pittsburgh.

Water-proof Hats, by Edward Patchell.

U. S. 6 pounder, mounted; made in Pittsburgh, by M'Clurgs and M'Knight, (issued for the state of Kentucky, and on its way thither) sent by Lieut. Wells, through the direction of capt. Talcott, of the U. S. Arsenal.

Also, a very fine Musket, made at the Arsenal.

Fine specimens of Beets, Carrots, Celery and Ruta Baga, raised by John M'Garrowgill, and a very large Radish, by J. J. Neal, of Mifflin.

Crops.—Samuel Bell raised the average quantity of 32 bushels of wheat per acre, on 8 acres of ground.

PREMIUMS.

On Tuesday at 2 o'clock, the following premiums were awarded:

For the best Brood Mare, to Mr. M'Fadden,	$10 in silver-plate.
Best Colt, C. H. Israell	5
Filly, Adam Coon	5
Bull, James Gray, silver cream jug	10
Bull Calf, James Gray, spoons	5
Milk Cow, Wm. B. Foster, ladle	10
Heifer, Wm. Robinson, jr. cup	6
Sow, Zenos Neal, spoons	5
Pigs, Alex. Hill do.	3
Merino Ewes, J. Glaser	5

Manufactured Articles.

Best Linen Shirting, Mrs. Geo. Wallace, silver cream jug	$10
2d best, James Melvin, spoons	5
3d do. Miss Snodgrass, do.	5
Best Flannel, Miss Ann M'Clure, ditto	5
Woollen Cloth, W. Arthurs, ditto	10
Lindsey, John Hodge, ditto	5
Carpeting, Mrs. Darlington, ladle	10
2d best, Mrs. J. Irwin, spoons	5
Best Bonnet, Mrs. Sheppard, ditto	5
2d do Miss Petar ditto	3
Hat, Mrs. Mary J. Hays, ditto	5
Linen Socks, Mrs. Jane Davis, ditto	5
Woollen Socks and Stockings, Mrs. Davis and Miss Cowles, spoons	5
Woollen Stockings, Miss Susan Rees, ditto	3
A piece of Thread Lace, Miss Haney, ditto	3
To Mrs. Flemming for her superior industry in manufacturing Coverlets, Shirting and Table Linen, spoons	5

To John Keen of Indiana township, for a sample of Castor Oil, from beans raised by him on his own farm. Mr. Keen has raised this year 15 acres of this plant—silver spoons $5, and a Volume on Agriculture.

To Wm. Montgomery, for his yoke of young Oxen, spoons $3.

To Anthony Beelen, for his Shelled Barley and 3 boxes of Cigars, spoons $5.

Mr. Beelen raised the tobacco out of which these cigars were manufactured from seed procured from the Havana.

The Society had also before them a box of cigars presented by A. W. Foster, Esq. of Westmoreland county, as a specimen of tobacco cultivated by himself, near Greensburgh, from the Havana seed.

The cigars of both these gentlemen were well flavoured, and wanted only age to equal the imported; though mere luxuries it is well to have along with our luxuries the profits of their cultivation and manufacture.

This being the first exhibition of the kind in this county, many were not prepared to enter into competition in several subjects; the display of manufactured articles was therefore deficient in number and variety, though excellent and admirable in quality: Several specimens of live stock expected from a distance did not arrive, in consequence of the bad roads and disagreeable weather. Hereafter the society will fix an earlier time and more suitable day for the exhibition, provide larger accommodations for the show of domestic manufactures, and make such arrangements generally for the better as their experience has suggested and their means will permit.

In consequence of the number of gentlemen from different parts of the county who took this opportunity of joining this society, its funds have received a considerable accession, and will enable them on the next occasion to offer higher premiums and extend them to other objects. It is impossible here not to notice the liberality of our farmers and citizens generally in contributing to this institution; to feel gratified at the cordial support it has received from all quarters, the candour with which it is regarded, and the good sense and public spirit of the people at large.

HARMAR DENNY, *Sec'y.*
Wednesday, Oct. 30, 1822.

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TO THE EDITOR OF THE AMERICAN FARMER.

FALLS OF THE GREAT WABASH,

Mount Carmel, Edward's county, Illinois,
DEAR SIR, *March* 20, 1822.

May success attend the labours of *Mr. Niles!* May Baltimore ever maintain a high rank for patriotism and individual enterprize! Being a "pioneer" as you have properly styled me, in these new regions of the earth, I feel disposed to drop a line occasionally. On yesterday I received a letter from Boston, which has induced me just this minute to drop my "gun" (having been successful in procuring my wife a pair of fine ducks) and now, prompted by the impulse of the moment, to scribble a few lines, which if you can decypher you will do well.

You will recollect, that on the 16th of April last, I addressed you a letter containing a sample of *cotton*, the production of *our soil*, both of the timber and prairie lands. I marked the prairie cotton first rate, and the timbered lands (on the river) second rate; and at the same time enclosed like samples to the Postmasters at Philadelphia, New York and Boston, not having any knowledge of the manufacturers of those places; it was not till yesterday that I received the return from the latter place. I now, sir, lay before you the general opinon thus obtained of our cotton; the manufacturers having reversed my *rates*, and given the preference to the *river-land* production. Mr. Skinner in his answer (dated August 5th, 1822,) to my circular of April 16th, states "I have shewn the samples of your cotton to our chief manufacturers, who admire it on account of its beautiful whiteness, and the fineness of its fibre, but they find its staple somewhat shorter than desirable, still the best is very good, and would bring 16 cents per lb. here at present: the other would bring 14 cents."

Messrs. W. Young, Son, & Co. manufacturers, Rockland, on Brandywine, Delaware, under date of June 11th, 1822, in answer to my circular, states, that the Post Master of Philadelphia having put my circular into their hands, they found "the samples of cotton enclosed of a beautiful white, but in staple and strength resemble the Alabama and Tennessee (cotton); what staple they have is very weak, and that of the parcel marked first is worst. It is impossible to say at what rate they would pass in our market; there is but little demand for any thing that is not good staple, as there are few objects it could be applied unto at present. The samples would answer only for the coarser yarn, wadding, batt and candlewick. The colour is excellent, and perhaps the staple in general is better than that sent." (This was a fact, having only picked up the first locks that came to hand.) "All the manufacturers choose that cotton which is strong staple; it is that which brings their goods with repute into use. Your cotton is also very clean. We have not yet spun any cotton. Our woollen factory produces every kind of cloths," &c. (prices stated.)

Peter H. Schenck, Esq. of New York, writes June 13th 1822, "The Post Master of this city (Gen. T. Bailey) handed me your letter of the 16th of April last, with two small samples of cotton. I *own* a cotton factory, and am manufacturing about 8000 yards of goods per week, and am using the first quality of Louisiana cotton, and no other (about 2000 lbs. per week.) The samples of cotton you sent are very handsome and clean. The latter quality is very important. The staple is not as long as the Louisiana. Such cotton would now bring 16 cents—any reasonable quantity, but it must be clean, and the staple not injured by the gin. You mention your wish to enter into a contract for a large supply, you will find no difficulty at any time to sell your cotton in this market, if it all turns out equal to the samples.——But I must have a much larger sample to judge of its real value."

As the cotton market is down, our country women are manufacturing our own cotton, and find it superior to any that has ever been brought from below. Indeed the Tennessee and Alabama cotton cannot come into competition with it.

William Hill, Esq. of Boston, under date 12th February, 1823, states "that your letter with samples of cotton was put into my hands several months since by the Post Master, &c. The cotton looks bright and clean, though the staple is rather short. Louisiana cotton is worth here 15 a 16 cents per lb. Georgia upland 10 a 13 cts.; cotton like your sample would bring 13 a 15 cts.; and I think an exchange might be made to advantage with the agents of some of the manufacturers for some domestics, &c. having been for several years past in this trade, have acquired considerable knowledge in the article of cotton, &c."

When the rage for settling new countries shall subside, I do not hesitate in stating that it will be found that the country situated between the Ohio and Mississippi, particularly that district embraced within the bounds of the state of Illinois, must become the *garden* of these western regions; and although the first settlement of this country has, and will be attended with serious difficulties on account of sickness, yet every impediment will be removed by that ardour and enterprize with which the climate and soil must unquestionably prompt its inhabitants to manifest. Such were the evils attending the settlement of Ohio, and much worse, but how speedily removed!

The soil is unquestionably the best in the world. It is superior to that of Ohio, Kentucky, Indiana, Tennessee, Alabama, or Missouri. The soil of Illinois is more uniform than that of any district of country of the same extent. It varies very little from Wabash to Mississippi, is high and breaking into waves in every direction, and presenting landscapes that I defy any artist to imitate. The prairies in spring, summer and autumn are beautiful beyond description: in winter they are gloomy—

"So fades the lovely blooming flow'r,
Frail smiling solace of an hour;
So soon our transcient comforts fly,
And pleasure only blooms to die."

The highlands of the Missouri elevate the winds, and give stability to the climate, or rather more so than is enjoyed by the other western states; this is evident, as the grape, May duke, cherry, and Portugal peach will flourish here that will not grow elsewhere, this side the mountains. I will but add one more remark in relation to the soil, and that is from its appearance it will never wear out. The French have tried it for more than 100 years, and the land yields as kindly as ever, and as abundantly. From two to six feet (sometimes ten) we have the black mould, from ten to fifteen feet of yellow clay, and this generally founded on a strata of stone coal, or blue clay—and under this a slate or sand rock.

The following are the remarks of a medical gentleman on this subject. "I present you with some specimens of a substance found from the surface of the earth to the distance of fifteen or twenty feet, or more below it, in digging wells in this country; I suppose it to be sulphate of lime, gypsum, or in other words, plaster of paris. Be this as it may, it is worthy of remark, that on a bank of earth taken up in digging wells here, and where the substance abounds, grass, weeds, and I believe other vegetables grow as luxuriantly as in almost any other place. This substance exists in small bodies of from an inch to a quarter of an inch in diameter, very rough, sometimes branching, and of various lengths.

The conclusions I draw from these facts are, that the land here will be always highly productive, and that a thousand years from now, when the face of the land may be much worn, still vegetation will go on as kindly as at this time, the force of fertilization here being inexhaustible."

Respectfully yours, &c.
E—— I——.

December 13th, 1822.

All of which, I respectfully submit to your consideration, to do with as you see proper.

I am, dear sir,
Your ob't. ser't.
THOS. S. HINDE.

P. S. The site we have selected, and now improving is a very beautiful one, at the junction of the White rivers and Wabash, and the Patoka river also—forming a junction with the Wabash, about an half, or three quarters of a mile below White river, and the falls are all above.

N. B. I find that Mr. Jefferson in his Notes on Virginia was correct in asserting that the Catawba (otherwise called Catalpa) tree was a native of the Wabash, I was at a loss at first to know what kind of tree it was, when I first saw it in its native state, growing like other trees very tall, being surrounded by the forests: trees as well as men will contend for the supremacy! but when unobstructed in an open space, they branched out as usual, and had the same appearance as those cultivated. *The running rose*, described by your correspondent of Carolina, is a native also of Ohio and Illinois; I ornamented a part of my house with them in Ohio, where they are abundant, and have planted them in my yard at this place; they are green in summer and winter; in the winter they are covered with leaves, and the stalks will run 15 or 20 feet or more.

Editorial Correspondence.

AGRICULTURAL PROSPECTS—REVERSED.

DEAR SIR, *Wheatland, May 19th*, 1823.

In No. 7, of the American Farmer, I observe an extract from my letter to you of the 23d ult. and a corresponding one from another correspondent, giving the most favorable representation of the state of our crops in this section of the country; as I conceive it to be of Importance that the community should be kept correctly informed as to our "agricultural prospects," and as these prospects are most wofully and fatally changed since the date of the above communications, I deem it to be my duty to apprise you of the melancholy fact, to guard against the evils that might arise from erroneous impressions on this interesting subject. In consequence of the general failure of crops for the three preceding harvests, together with the reduced prices of the staples of the country; the body of our farmers had become awfully embarrassed in their pecuniary circumstances, and they laudably determined to make an extraordinary effort last fall to relieve themselves from their difficulties by putting in much larger crops of small grain than usual. The rye having been previously committed to the earth, the seeding of wheat commenced early in the month of September; and many of the largest crops were put in, and finished by the first of October. During the ploughing season not a drop of rain fell, and that operation was consequently performed in the best possible manner. At the latter end of September the rains set in—the wheat was brought up finely, and being liberally nourished by a continuation of the most genial seasons, vegetation advanced with a rapidity and vigor never before experienced, and our fields by the month of December were as verdant, and the growth as luxuriant as generally in the month of April. The winter was not considered to be unfavorable. Vegetation continued to advance with unprecedented rapidity during the early spring—and our fair flattering prospects received no check, until a few days after the first of May, when the wheat was discovered *to be at a stand*; this was at first attributed to the May-weed which sprung up in our fields a thousand fold thicker than was ever known; but as this weed is very short-lived, and had heretofore been regarded as harmless, no apprehensions were entertained that as soon as its ephemeral growth was over, our crops would revive and flourish without farther interruption. Delusive hope! From that time the crops were perceived to decline daily and rapidly—and the farmer soon became assured that his hopes were blasted by the ravages of an enemy whose powers of desolation are unbounded, and against whose assault he possesses no means of resistance. The havock committed by the *Hessian Fly* is without example, and surpasses all description. Our fields are literally laid waste, and cattle are turned on many of them, which three or four weeks ago promised an ample remuneration to the industrious farmer for his anxious and toilsome care. His late hopes, so bright and so buoyant are converted suddenly into black despair. I have already said that our people are generally in debt. This misfortune exists to an alarming and awful extent. What they will now do under this new and severe calamity I cannot tell. It is only known to him who in his inscrutible wisdom dispenses it!—Our clover has wholly failed for the two last seasons, and its place occupied with innumerable weeds of the most pernicious kind.—The Rye crops are remarkably good.

I have given you, my dear sir, a gloomy, but a faithful picture—rest assured it is not exaggerated.

With sincere regard and esteem,
Yours truly,
H. S. TURNER.

N. B. Great complaints, as usual, of the grub or cut-worm, in the early planted corn. Even mine has been severely attacked under circumstances that have resisted its effect uniformly for many successive years.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

DOMESTIC RESOURCES.

American genius is ever on the alert to supply the demands of science and the arts—as well to elevate national character abroad, as to promote its aggrandisement at home.

Whilst we proudly vaunt the discoveries of Perkins and others, who astonish the world with their philosophical speculations, and practical results, we should not be unmindful of more humble labours in the cause of *Internal Improvements.*

A late "National Intelligencer" announces an invention of no ordinary importance: "The Virginia Water-proof Cement"—If the article really merits the high character given to it, if like many visionary projects, and false conceptions, its obscure author would impose on public credulity, no doubt the *truth* of the case will be soon established under *the new order of things*, ordained by the legislative wisdom of Virginia.

The speedy consummation of (perhaps) the oldest enterprise of the kind, in the United States —the James' River canal, and up-country navigation, seems reduced to moral certainty. The renovated vigour and zeal with which the works are now said to be progressing, sensibly influences her southern sisters—Our contractors for aquatic masonry, may promise themselves great advantages by substituting native materials; as more economical than those imported from foreign countries.

Hence then, Mr. Skinner, may not the subject be worthy of your correspondents' attention, to enquire into, and to investigate its merits? and may we not receive prompt and conclusive testimony of its usefulness, from the enlightened Virginians, and their lately appointed *engineers?*

The Virginians, ever conspicuous for their liberal patronage of patriotic pursuits, will not be wanting in justice to the individual citizen whom they have cherished, upon this occasion—nor will their regard for consistency of character, suffer imposture to escape their keenest sensibilities—if, indeed, there shall be any possible cause of suspicion, as to the *facts* upon which a general adoption of this Cement must mainly depend.

Since there appears to be no medium more apt, (or whose efforts will be more generally aided by public journalists) for free discussion and frank communications, than your widely extended paper, the public may be reasonably contented, under the hope and expectation, of soon seeing ample reports from the inquisitorial powers of the ancient dominion. YADKIN.

15*th April*, 1823.

THE FARMER.

BALTIMORE, FRIDAY, MAY 30, 1823.

☞ It has been already intimated that we were endeavoring to collect information in regard to *flax* and *hemp*—their natural history, culture, modes and means of preparation, &c. Our wishes have been accomplished to the extent anticipated. The Editor will be absent for a week or two on business of the General Post Office, and cannot hand to the printer the *practical* parts of this information, as they are chiefly in manuscript, and will require some attention to the *arrangement* of them. The particulars, obtained directly from and through the agency of S. Swartwort, Esq. of New York, are very interesting, more especially perhaps to our friends in the west, whose lands are so well adapted to the growth of hemp. They embrace an engraving of Goodsell's patent hemp and flax dresser, and will probably appear in number 12. In the mean time it is hoped that as a part of the natural history of vegetables, with which all farmers' sons and daughters ought to acquire some knowledge, we shall be justified in inserting these articles, long as they are.

A New York paper, speaking of the flax dresser and grain thresher, says, "one man can get about 150 pounds a day, or 100 lbs. flax ready for spinning; or 10 bushels clean clover seed; and two men will thrash and clean from 80 to 100 bushels of wheat with the same machine, with a very little variation. They are getting into general use in South Carolina, for cleaning rice, instead of the expensive mode of pounding, as heretofore."

* * *

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7 25 sales—White wheat, $1 60 to 1 64—Red do., $1 57 to $1 60—Rye, 85 cents—Corn, 56 to 58 cents —country Oats, 40 cents—Beef, 8 cts per lb. —Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6— Orchard Grass do. $3—Herds' Grass do. $3— Timothy do. $4 50—Millet, none—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $3 per bbl.—No. 2, $2 75—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, 20 to 25 cts per lb.—Eggs, 12½ cts. per doz. —Hay, $17 per ton—Straw, $10.

TOBACCO is selling nearly as per last report— Fine Red Patuxent Tobacco, part of the crop of R. W Bowie, of Prince Georges, has been inspected and sold this week—8 hhds. best, for $15 50— two second, for $8—five crop at $11—two second at $5—This crop came into the market in fine condition for exportation—Two hogsheads made in Calvert county by Mordecai F. Smith, sold for $18.

CIRCULAR.

Falls of the Great Wabash, Mount Carmel, Edwards county, Illinois, March 17*th*, 1823.

SIR,

The undersigned commission merchants of this place, have commenced the present season, the shipment of the produce of this country, and will keep a bacon establishment for curing and preparing it for foreign market, in the best manner: (the bacon and beef of this country, when well cured is of a superior quality.) They will also ship pork, beef, lard, tallow, beeswax, flour, kiln dried corn meal, venison hams, deer and bear skins, and poultry of all kinds; beans, peas, potatoes, &c. The want of a proper knowledge of the market and merchants of your place, has induced us to address our circular to you, sir, with a request that it be put into the hands of gentlemen who will feel an interest in participating in the trade of our infant country. We shall be happy to enter into a contract, or contracts almost to any amount on an advance of one third or one fourth of the amount required, and make the delivery here, at New Orleans, or at your port.

We are respectfully yours, &c.
THOS. S. HINDE, }
SCOBY STEWART. }

P. S. We will contract at a stipulated price for produce or purchase up, and ship on commission only.

REFERENCES.

OVERSTREET & BLAIR, *Louisville, Ky.*
TOWNSLEY & BONNY, *New Orleans.*
Hon. HENRY CLAY, *Lexington, Ky. or at Washington City.*
Hon. JOHN MCLEAN, *Com. Gen. L. Office, Washington City.*
JOHN S. SKINNER, Esq. *Baltimore.*

N. B. Our cotton is gradually coming into market—a supply of this article may also be had The crops of wheat will be short, there will in all probability be a scarcity of pork.

FOR SALE

At a low price and on a long credit, the FARM on Elk Ridge, occupied by Mr. H. Scott, and formerly owned by Luther Martin, esq. containing about eleven hundred acres.

It is situated about eleven miles from this city, near the Washington road, and is considered remarkably healthy—The situation is handsome, and the land easily improved by plaster and clover. This property will be divided if required, and immediate possession given—For terms apply to

ROBERT & JOHN OLIVER.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE, TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

No. III.

States and Communities, no less than Individuals, are hastening to the vortex of ruin, in proportion as they suffer their expenditures to exceed their income.

20. Under this proposition I propose to explain, the *former* prosperous situation of the principal emporium of Maryland, and the imminent danger which *now* appears to await it unless suitable, and effectual measures shall be adopted for its relief. By referring to the statistics of Baltimore, it appears, that in 1790 our population was only 13,503; that in 1800 it had increased to 26,514; in 1810 to 46,555; and in 1820, according to the last Census, to 62,627. Consequently, our number, during the three last intervals of ten years each, has been annually advancing at the rate of 1300, 2000, and 1600 respectively; and taking the whole average of the last 30 years, our yearly increase, during that period, has exceeded 1600. Were the same ratio of increase to continue for 30 years to come, our population in 1850 would be enlarged to 110,000; and if we might take the liberty of extending our views to the end of a second period of 30 years, our number in 1880, at the same rate of increase, would amount to 160,000.

21. But in the opinion of *some* this estimate is greatly below the number, that, with due encouragement, and a reasonable state of prosperity, that period may be expected to realize; and such an anticipation appears to be completely warranted by only giving our calculation a different form: It appears, that, within the last 30 years prior to 1820, an increase which then commenced at 13,503 had, in 1820, attained to 62,627. This, it may be recollected is more than four and a half to one; and by computing in that ratio, four and a half times our last innumeration will produce upwards of 280,000 for our number 30 years hence; and four and a half times that result amounts to 1,260,000 for our population in 1880.

22. I am aware that, *to some*, the latter estimate, may, at first sight, appear to be a visionary calculation; that by *some* it may even be denounced as a great and improbable result. But, before such a decision is formed, permit me to request that the subject may be fairly and deliberately examined. Upon examination it will be found that many instances have *actually* occurred in which *none* but large calculations are adequate to the purpose; in which *none* but very high numbers are even in the vicinity of the truth. The population of Jeddo for example, is stated at one million; of London, at nearly eleven hundred thousand; of Canton, at one and a half to two; of Nankin at two; and of Pekin at three millions of inhabitants. Hence we have conclusive geographical evidence of cities, *so great* as to contain more than double the number anticipated in the estimate before us; so *very great*, as to exceed it nearly in the ratio of two and a half to one; of a population, so *extremely numerous*, as to have passed through the whole series of tens and hundreds of thousands, up, not only to a million, but to *two* and even to three millions. From what cause then, is it to be inferred, that the population, wealth and importance of Baltimore will never rise to an equal height with those cities in the scale of pre-eminence? Our local advantages for a very extensive prosecution of commerce, at home and abroad, are known to be numerous. They are also appreciated as being of the first magnitude, and were their excellencies only judiciously developed and improved, capable of furnishing subsistence, habitation and clothing to a very extensive and crowded population.

23. But there can be no stronger earnest to Baltimore of a capacity for *future greatness* than our own rapid growth to an exalted rank among the most opulent and enterprising cities in the world. In less than a common life time we have risen from the rank of an obscure hamlet, to that of acknowledged importance. We are *now* the *third in population* and *the fourth in commerce* in the United States. To the great rapidity of our growth in size and in consequence it is believed that a parallel can no where be found in the annals of history. In the year 1752 the extent of our improvements consisted of 36 houses, and that of our population to 360 individuals, admitting that each house was occupied by a family of ten in number. Our present number in 1820 as has already been stated was 62,627. This amounts to an increase of 174 to 1; whereas were we to succeed in realising the anticipated population in 1880, of 1,260,000 the required ratio would very little exceed 20 to 1. Hence, then, if we may venture to judge of our *future* by our *past* increase of population the estimate in question instead of being denounced for extravagance, would appear to be entitled to confidence for its moderation. An increase of only 20 to 1 during a future period of 60 years, which has lately commenced, is very far short of 174 to 1 during a period of 67 years, *only seven years longer*, that has recently expired.

24. But whether Baltimore will continue to flourish, or not, *essentially* depends upon future events. It may *most essentially* depend upon our own attention or inattention to the improvement of those great local advantages peculiar to our situation. Had internal improvements been heretofore neglected, and had we continued destitute of the acknowledged advantages, to the community, of our numerous turnpike roads, there are *many substantial* reasons for believing we *should not* have risen to more than half our present wealth and importance, as an emporium of commerce; and it is presumed there are reasons equally *numerous and substantial* in favour of the conclusion, that it is impossible for us to experience half the advancement that otherwise awaits us, should we *now* relax in our efforts; should we *now* give up to content ourselves with what has already been done; and continue to neglect the far greater objects in point, utility and importance which still remain to be accomplished.

25. The time has now undoubtedly arrived when the great rapidity of our growth, has rendered it indispensibly necessary, on our part, carefully to examine our present situation. To neglect this, will to a certainty, it is presumed, be neglecting the only possible means of our future prosperity. That abundant resources are required to supply our present population, *even* with subsistence, habitation and clothing, is too evident to be doubted. Every individual requires a daily supply of the necessaries and conveniences of life; the cost of which will be far greater in *some* instances than in *others*. *Many* who are wealthy "fare sumptuously every day," and spend an abundance. There are *many*, again, who have *but little*, and who of course can spend *but little*.

26. Under these circumstances, and including in the consideration, men, women and children of every description, I have procured a variety of estimates to be made, of the least sum that upon an average of the whole, might, most likely, be required for the sopport of each individual. These estimates made by different persons were very different in amount, varying from two hundred dollars and higher, down to fifty the lowest of all. Hence one hundred dollars might be assumed as being under the medium; but upon the present occasion precision in the sum is by no means material. Every individual who pleases, is *very respectfully*, invited to make his own estimate according to his own mind. The general principles designed to be explained will be as certainly developed by a sum that is too high, or too low, as if it were correct. With this understanding let the most moderate sum of fifty dollars be selected, and at that rate the yearly expenditure of sixty thousand persons, (omitting the odd 2,627) will amount to three millions of dollars. Were the medium sum of one hundred dollars to be adopted, six millions would then be the result.

27. From the preceding calculations the evidence appears to be clear and conclusive, that there must be more than three millions of dollars annually expended by the citizens of Baltimore, for subsistence, habitatinn and clothing. This is certainly a very serious sum to be raised yearly; and it is equally certain, that the method and means by which it can best be accomplished, require to be very seriously considered Nor is it by any means sufficient that they should be only considered, and for the business there to remain. It is in the next place, *all-important*, that the whole energies of Maryland should be consolidated and united together, *as the strength of one man*, to accomplish, whatever may, upon a candid and accurate investigation of this highly interesting subject, be certainly ascertained to be within the capacity of the state, and at the same time most extensively beneficial to the great bulk of its population.

28. This, it must be evident to every reflecting mind, is the only judicious and safe course for us to pursue; the only course, in fact, that can possibly secure to us a state of future prosperity. Should we on the contrary, *unhappily for us*, become divided in our opinions; should it, in consequence of any strange error of choice, be determined, at all hazards, to neglect the benefit of the *many*, for that of the few only; to reject an object of *great* and select one of *little* importance, in promoting the interests of the state at large; or should we injudiciously undertake more than we can accomplish, and by that means accomplish nothing; under these circumstances, what better can we, *rationally*, expect, than that our expenditures will presently exceed our income, than, that the vortex of ruin must of necessity open, *all horrible* before us; and that *we*, through the extravagance of our folly, cannot fail to be precipited, *headlong*, into its most direful centre?

WILLIAM KENWORTHY.

TO THE EDITOR OF THE AMERICAN FARMER.

ROUTE RECOMMENDED FOR A CANAL FROM THE POTOMAC.

Locust Level, Frederick County,
May 18th, 1823.

John S. Skinner, Esq.

Sir—The contemplated Potomac canal begins to attract the attention of the citizens of Frederick and the county generally; and as the Potomac is the sole property of Maryland to low water mark, I deem it just, that the citizens of Maryland have the preference, if not the entire privilege, of using its waters for their own benefit, if they think proper; and a canal to the city of Washington, would be of no advantage to the citizens of Frederick county, (excepting a few individuals immediately on the banks of the river.) But a canal to pass through the Maryland tract, New-Town, (Trap) through Frederick, Newmarket, or to the Poplar springs, where it passes nearly through the centre of the richest land in the county, would be convenient for all; and from the wealth of the citizens of Frederick, and the county generally, I have no doubt but they would contribute largely either by taking stock, donations, or suffer themselves to be heavily taxed, to aid in having the canal completed. I am well acquainted with every part of the route, which I presume would be most advantageous to conduct said canal through Frederick county. I would suggest commencing about two miles below Harper's Ferry, near the Stone mill, keeping nearly with the present road to Peynes' hill; where, by making a short curve, it would avoid the hill; then no material obstacle through the Maryland tract, crossing Catoctin creek, near Matthews' mill, or to New-Town, (Trap) to Catoctin mountain; and where the present road crosses is a chasm, and a small stream running down eastwardly, nearly from its summit, almost forming a natural canal; from thence, passing over two small branches of Ballengers' creek, which empties into Monocasy, about three miles S. E. of Frederick. No obstructions to Frederick, where it might unite with Carrol's creek, which runs through the town, and has been canalled a piece east of the town—from thence to Monocasy, nearly level—about half a mile below Monocasy turnpike bridge, is a chasm through the hill, (where a small rivulet runs, which empties into Monocasy,) almost forming a natural canal—from thence to New-Market, crossing the head of a branch of Bush creek, which runs S. W. into Monocasy; then keeping nearly with the present turnpike road to the Poplar springs, (crossing, probably, some of the head waters of Linganore.) At the Poplar springs, commences a branch, or small stream, which runs nearly direct to the Patapsco; from whence, I conceive, there would be but little difficulty of proceeding to Baltimore. From the knowledge I have of America, (and I have travelled through sixteen of the states, and principally with a view of exploring the country,) I candidly believe a canal can be conducted on, or near the route I have described, with as little (if not less) expense for the distance, than in any other part of America, (some parts of the southern states near tide water excepted;) and none could be constructed, which, in my opinion, would be more profitable. The advantages to Baltimore, Frederick, and the neighborhoods it would pass through, would be infinite.

I remain your friend,
And very ob't. serv't.
JOHN HUGHES.

AGRICULTURE.

FOR THE AMERICAN FARMER.

ON THE ORIGIN OF CHEAT.

Sir,

In looking over one of the numbers of your paper for the month of April, I observe an essay on cheat, signed S. V. S. This correspondent of your's, ridicules the notion, that cheat is produced from wheat—and styles those who believe it, the superstitious and the credulous. I have always believed that this metamorphosis did take place, and shall still run the risk of being classed among the credulous and superstitious, until I receive stronger proofs than any offered by S. V. S. that it does not. Passing over his pleasantry about the good old farmer and his book-learned son Tommy—let me enquire what has he brought forward to prove that wheat does not produce cheat? Why, he asks, if we ever knew a dog to turn to a cat, or an ox to an ass; an orchis to a butterfly; a polypus to become a sensitive plant, or a tubularia to a honey suckle? &c.—Now let me ask in my turn, if S. V. S. had lived before such discoveries were made, would he have known that a mule could be produced from the two distinct kinds of animal, the horse and the ass?—Or that good apples could be obtained by ingrafting on the stalk of a hawthorn? As he has introduced the names of Virgil and Ovid into his essay, let me ask, by the way, if those two great men might not have been acquainted with cheat, without ever ascertaining how it was produced? For how many ages do we find the world to have remained in the dark, on subjects of much greater magnitude, than the one under consideration?

The only attempt that S. V. S. makes to shew that cheat is not produced from wheat, is a bare assertion, and to me a very improbable one; that the seeds rise near the surface of the earth, and sprout, after lying in statu quo for a thousand years, at a considerable depth. Now, to take this essayist on his own ground of probabilities, I leave it to common sense to say which of these two theories is the most credible—that wheat turns to cheat, or that cheat seed remain one thousand years in the earth without rotting or sprouting? S. V. S. will never convince his readers of the truth of his theories by mere dogmatical assertions, unsupported by proof or argument.

I have, Mr. Editor, been for several years very much annoyed by cheat in my wheat crops—and have from every observation, been induced to believe, that this pest is the production of spurious wheat. Though I confess that, (like S. V. S.) I have considered it a strange production. The premises from which I draw this conclusion, are 1st—I never saw cheat grow in any land previous to a crop of wheat's being in it.—2dly. I have known the whole production of a yard where wheat, (and nothing but wheat,) had been trodden out, to be cheat. 3dly. If land is fallowed where wheat has been reaped, immediately after harvest, nearly half the produce will be cheat—4thly. If you sow wheat, where an over quantity of ashes is deposited, a considerable portion of the produce will be cheat.—5thly. I never saw this result, under the abovementioned circumstances, after the seeding of any other grain but wheat. Why may not the grains of wheat be operated on by a combination of circumstances in climate and soil to change them to bromus canadensis, a plant varying very little from wheat in its growth and appearance, except in the head, which assimilates more to that of oats. We find that Indian corn will change its kind merely by moving it from a northern to a southern climate and soil. We also find that by a particular combination of circumstances in the climate and soil, this plant sometimes produces grains where nature intended the tassel to grow; and at others, that the place both of the ear and tassel is supplied by fungus. Is not this lusus naturæ as remarkable, as the change of wheat into a farinaceous production very similar to it?

I hope S. V. S. will not consider me as asserting positively that grains of wheat produce the bromus canadensis; nor as one unwilling to be convinced to the contrary, whenever he shall bring forward satisfactory proof. I should be glad to ascertain that it was not the production of wheat, and hear some plan devised for eradicating it from our wheat lands.

Respectfully your's,
PLAIN SENSE.

☞ Destruction of young fruit trees.—I have in the last three or four years lost many promising young apple trees, by a small brown worm, resembling in shape the common cut-worm, which gets into the body, and preys upon the soft wood, just under the bark. They attack the trees early in the summer. If the trees are not narrowly watched, the first intimation given of the presence of the worm, is a rapid decline of the tree; which, upon inspection, has the circulation of the sap completely cut off by the ravages of this worm, between the bark and hard wood of the tree.—A remedy for this evil, from some of your correspondents would be acceptable to—your's, &c.

P. S.

TO THE EDITOR OF THE AMERICAN FARMER.

HOW TO IMPROVE LAND BY GREEN FALLOW.

Sir,

On the 12th day of June, 1821, I broke up for the first time that year, a small lot of tolerably good ground, clean fallow; it was too dry, therefore turned up so much in lumps that the harrow could not reduce it to tolerable tilth; however, I sowed thereon, millet, and early in June, clover seed, and harrowed them in. Some of the millet on the most friable parts exceeded six feet in height—it was harvested when fully ripe. The clover seed took well, though the season was not favourable: stood the winter well, (though the ground was of that kind which throws up, or spues,) and produced a remarkably fine crop the ensuing spring.

This experiment, I may remark, was an accidental one, but the result excited attention. I have observed that of the clover seed sowed in February, on winter grain, much is washed off the general surface, (for it is to be kept in mind that most of my land is of the kind mentioned above, and two well known to need further description,) and deposited thickly in low places: many which germinate favourably, perish before harvest, and very many wither after that period under the scorching sun, not having acquired sufficient strength to stand the sudden and violent shock, the loss of so great a protector in time of utmost need; so that on the whole, the plants which are thriving in October, bear but a small proportion to the seed sown. Clover seed, I have found, stands a better chance when sown with oats; but the last difficulty stated above—the sudden exposure, takes place here; besides I must plough, and seed early, to ensure the crop. Now, supposing my ground to be previously set with clover, I must, in the first case, forego, in a great measure, the advantage which a growing crop will receive from the decomposition of vegetable matter; and in the second case, I shall have but little decomposition to profit by. May not these difficulties be greatly obviated by the use of millet, thus: From the first to the tenth of June, turn in the clover lay, and immediately sow clover and millet seed. The millet will give a crop of hay, excellent, I know it to be, when cut as it begins to ripen; and will protect the clover plants till after the dog days. They will be then uncovered in a thriving state, at a time when they can receive no considerable check from heat, and ready to profit by the autumnal dews. This process may be repeated the next year, and the next; thus annually giving and receiving. I believe, also, that we cannot find a better time than this to apply stable manure, either as it regards the fitness of the manure, the economy of using, or the immediate double benefit to result—I mean, to spread it *moderately* before the plough—its conjunct action, with the decomposing clover, will, I think, be peculiarly felicitous. Another advantage of considerable im portance, will result from this plan, viz: the destruction of noxious weeds, (*wild onion, or garlic* among the number,) which cultivation at this season tends to produce.

I intend to make a fair experiment this summer, and have made this communication, in hopes that some others may be induced to do likewise.

Respectfully your's,
W. B. R.

WAKE AGRICULTURAL SOCIETY.

At a meeting of farmers and other citizens of this county at the court-house, on Thursday last, a Society bearing this title, was constituted under the provisions of the late act of Assembly, for the encouragement of Agriculture. Moses Mordecai, Esq. was elected President; William Boylan, John Whitaker and Allen Rogers, Vice Presidents; Hartwell King, Treasurer; Joseph Gales, Secretary; and the following gentlemen were appointed Managers for the ensuing year, viz: William Polk, Charles L. Hinton, William Whitfield, William Hill, John W. Charles, Dempsey Powel and Wesley Jones.

The Society then adjourned to meet at Mrs. Jeter's long room, on Wednesday of May court, at 3 o'clock in the afternoon.

[*N. C. paper.*

From Phillips' History of Cultivated Vegetables.

HEMP.—CANNABIS.

Natural Order, Scabridæ. A genus of the Diœcia Pentandria Class.

The Latin name of this plant is the same as the Greek Κανναβις, from Κανχβοι, because it prospers best near watery places.

That this fibrous plant is indigenous to most of the European countries, as well as to Asia Minor, we have the authority of ancient authors, in opposition to the statements of some of our modern botanists, that it is a native plant of India only. Some of our Encyclopædias state, that the ancients used hemp only medicinally. Pliny is cited as their authority. In his 19th book, chapter 9, however, he informs us that hemp is equally good for making cordage; that the best for the purpose of making nets, and snares for wild beasts, was grown in Alabanda; and that the second in quality grew near Mylasium, both towns of Caria.

As a Phœnician colony settled there, it is probable that these people, so celebrated for their achievements in navigation, were the first who discovered the use of hemp in forming cables and tackle for their ships. They were in ancient times what the Britons are at present. Isaiah calls their country "the merchant city, the mart of nations, whose merchants are princes, whose traffickers are the honourables of the earth."

Pliny states, that the hemp which grew in some parts of Italy, and near Rosea in the Sabines' country, grew as high as shrubs; that it originally grew there in the very woods, without even sowing. It appears by the account of this author, that the Romans gathered the seed before the stalks, as he says the seed should be sown in February, and that the thicker it is sown, the finer the hemp grows. When the seed ripened in the autumn, it was rubbed out and dried in the sun, the wind, or in smoke, and the stalks were not plucked out of the earth, until after the vintage. "It is then," continues he, "the work of the husbandman to peel and cleanse it, which these people do in the evening by candle-light." It appears to have been diligently sorted; as this great observer of natural productions says, the worst part of hemp is next to the bark or rind; the principal part, and that of the best quality, was called *Mesa*.

Although we do not produce lawn or lace from the fibres of hemp, yet it is a plant of great importance to Britons, as it forms the sails and tackle of our vessels, from the huge cable of a ship of war, to the more humble, but not less profitable net of the herring-boat.

The sails and cordage of a first-rate man-of-war, require 180,000 pounds of rough hemp for their construction; and it is said to average five acres of land to produce a ton of hemp: thus one of those monstrous towers of human ingenuity, that

"Stems the vast main, and bears tremendous war,
To distant nations, or with sovereign sway
Awes the divided world to peace and love,"

consumes a year's produce of 424 acres of land to furnish its necessary tackle.

From this calculation it will be seen that Great Britain could not furnish itself with a sufficient quantity of hemp of her own growth to supply the immense demands of our shipping.

In the year 1763, we imported 11,000 tons from Russia; and Sir John Sinclair informs us, that in the year 1785, the quantity exported from St. Petersburg, in British ships, amounted to 17,695 tons, which would be the produce of 88,475 acres of land. In the year 1788, we imported from Russia 58,464 tons, the produce of nearly 300,000 acres, which at £20 per ton, would net the Russians £1,269,280. In the year 1783, France consumed 200,000 tons of hemp, of which more than one third was imported.

An act strongly demonstrating the folly of laying prohibitions on articles of commerce, (which often strengthens those whom it intends to disable,) was committed by the Russians in the year 1718, when they entered into a combination with the Swedes to deprive England of naval stores; and would suffer none to be exported out of their own diminions, but in their own ships, and at their own exorbitant prices; which instead of ruining our trade and navigation, turned our attention to our colonies, and induced us to procure from North America not only a sufficient supply for the use of Great Britain, but a large surplus for exportation.

Our government, fully aware of the important uses of hemp, has made several salutary laws, to render its culture an object of attention. In the year 1787, a bounty of three pence per stone, was allowed on all hemp raised in England, and duties have been laid on all that is imported.

China is celebrated for its abundance of hemp, particularly in the province of Xensi; but flax is not known to grow in that empire. The excellence of the Chinese hemp was noticed by Nievhoff, who attended the embassy which the Dutch East India Company sent to Pekin in 1655 and 6. From this embassy more information is obtained on the policy and natural history of China, than from any accounts since published of our own embassies: whether this is owing o the limited observation of our naturalists, or to the jealous restrictions of the Chinese, we cannot decide.

The late Mr. Elliot sent some seeds of the Chinese hemp to Mr. Fitzgerald, vice-president of the Society for Encouragement of Arts: which being sown, produced plants fourteen feet high, and nearly seven inches in circumference. This induced Mr. Fitzgerald to apply to the Directors of the India Company, to obtain some of the seeds from China, which were procured in 1785; but few of the plants ripened their seed in this country. Dr. Hinton made a more successful trial of raising the Chinese hemp in 1787, which produced one-third more of marketable hemp than the best English hemp was ever known to yield on the same quantity of ground. Few of the hemp-seeds will vegetate if two years old; to this circumstance may be attributed the failure of many attempts to raise this new variety of hemp.

The English hemp is much superior in strength to that which grows in any other country. Suffolk is the principal county where hemp is grown and manufactured: this is seldom or ever used for cordage. The cloth made from this hemp is more durable than the flaxen linen, as well as warmer; and has the advantage of becoming whiter by age and use than that made from flax, which will not maintain its bleached whiteness.

We import a considerable quantity of sheeting from Russia, which has this great advantage over our own hempen cloth, that, being drawn from the distaff, the fibres are longer and less crossed than those in the thread made by machinery.

Tusser gave this valuable hint to the farmers in Queen Mary's time:

"Where plots full of nettels be noisom to eie,
sow there upon hemp-seed, and nettels wil die."

We cannot but observe, that with all the improvements in the cultivation of this country since the days of that author, there are still to be seen many wide hedgerows that are the nursery of thistles and other impoverishing weeds, which might turn to good account if sown with hemp; particularly if they were allowed to be planted by the poor cottagers, either with this valuable vegetable or the more necessary root of the potato. These poor parishioners would then have an interest in keeping off depredators, and in protecting the fences instead of destroying them; their leisure would be spent in their own little territory instead of the ale-house, and their children would acquire early habits of industry in tilling a plot for themselves.

It is observed by the Rev. Thomas Radcliff, in his Report on the Agriculture of Eastern and Western Flanders, "that each day-labourer has, in most cases, a small quantity of land, from a rood to half an acre, for his own cultivation." He adds, "Their comfortable supply of linen is remarkable; there are few of the labouring classes without many changes. In riding with a landed proprietor through a part of the country in which his property was situated, a neat cottage presented itself: the clipped hedge which surrounded the garden, covered with linen, very white, suggested an inquiry, 'whether it did not belong to a washerwoman?' The answer was, that it was occupied by a labourer and his family, and that the linen was all their own. In common times a beggar is scarcely to be seen, except in the towns, and but few there."

Every circumstance that is connected with the comforts of the lower classes, and every device that can be invented to keep them from receiving parochial relief, should be adopted; for when once they have become familiar to this aid, their natural pride forsakes them, and few are the instances of their ever endeavouring to become independent of the agriculturist, on whom they now weigh so heavily as to endanger the prosperity of their support.

Frugality disappears the moment the labourer cannot obtain a living on his own personal exertions; and to economise, when they once use the public purse, seems against the nature of their mortified spirit.

Hemp is said to possess a property which renders it almost invaluable to the farmer as well as the gardener: viz. that of driving away all insects that feed upon other vegetables. It is a common practice in many parts of the continent to sow a belt of hemp round their gardens, or any particular spot where they wish to preserve their crops from the mischievous attacks of flies or caterpillars. We would wish this experiment to be frequently made in turnip fields; for, should it succeed in protecting those crops from the ravages of flies, as well as the cabbages from the caterpillar, it would accomplish a most desirable end.

It is presumed that Tusser made his observation, that, where nettles will grow, hemp will thrive and destroy the nettle, from the opinion of the ancients as to assimilated juices, an opinion really not deserving the contempt it is generally treated with by planters. Plants requiring the same nourishment never thrive in neighbourhood, and the hemp is nearly allied to the nettle; from the latter plant a tolerably good linen may be made.

It will generally be observed that nettles occupy a good soil, which might be advantageously metamorphosed into plots and banks of hemp.

A Sussex manufacturer, who wrote on this article in the Annals of Agriculture, informs us, that hemp may be raised for many years successively on the same ground, provided it be well manured. The quantity of seed required to sow an acre of ground, varies from nine to twelve pecks, according to the nature of the soil; the quality of the hemp also differs from the soil. The common height of the plant is from five to six feet. Mr. Arthur Young informs us, that in his tour through Catalonia in Spain, he saw extraordinary crops of hemp, where the land was well watered, and that these plants were seven feet high. The hemp that is cultivated near Bischwiller, in Alsace, is often more than twelve feet high, and upwards of three inches in circumference.

From the class in which this plant is arranged in botany, it will be observed, that the same seeds produce both male and female plants promiscuously: this is one of the secrets, in the work of Nature, which cannot be accounted for. The Date has the same peculiar quality; for when we plant the kernel of this fruit, it is uncertain whether the offspring will be a male or female palm-tree.

The flowers of the fruitful hemp are hermaphrodital, and, like the lofty palm tree, or some of the lowly strawberry plants, produce abortive seed, without the aid of the farina of the barren plant. It is a curious misappellation of the cultivators of hemp, who call the fruitful plants male, and those that are barren female; we are more surprised that botanical writers should fall into the error; or, rather, copy this blunder from one work into another for so many ages, without correcting a mistake that inverts the order of Nature.

The unfruitful plants are forwarder than the fruitful ones by a month: this is ascertained by the fading of the blossoms, the falling of the farina fecundans, and the stalks becoming of a yellowish cast. These plants should be drawn out and worked, if possible, while green, the hemp being then finer than that which is previously dried. The Abbé Bralle, in a Treatise upon the culture and management of Hemp, directs, that little paths should be made lengthways through the fields, at about seven feet distance from each other, to allow a passage for the person who pulls up the unfruitful hemp from among the other, which requires to stand more than a month after the barren plants to ripen its seed. The fibres of the hemp are prepared for spinning, by a similar process to that of preparing flax. The beating of hemp, which was formerly performed by hand, is now done by a water-mill, which raises heavy beaters, and only requires the assistance of a boy to keep it turned. This laborious work was formerly imposed as a punishment for vice, in the houses of correction. Hogarth has noticed this circumstance in one of his celebrated pictures.

It is a duty incumbent on society, not to allow hempen rags, or even old ropes, to be destroyed. They are carefully sorted by the paper-maker, the finest being reserved for the purposes of literature and correspondence, while inferior sorts are selected for the various purposes of packages and paper-hangings.

The seed of hemp, being boiled in milk till it cracks, is accounted good for old coughs, and a specific for the jaundice.* Dodoens says, that, in his day, the hempseed, stamped and taken in white wine, was highly commended as a remedy for the jaundice and complaints of the liver.

The juice of the green plant, instilled into the ears, mitigates the pains therein.†

Coles, in his excellent History of Plants, notices the virtues of hemp thus laconically: "By this cordage ships are guided, bells are rung, beds are corded, and rogues are kept in awe."

FROM THE ALBANY ARGUS.

ON THE CULTURE OF PEAS.

The pea is a native of the southern parts of Europe, and is found growing spontaneously in the western parts of our own continent. The family is a large one, containing several species; but of these the *field pea* alone comes within the scope of our present purpose. Of this, there are two varieties, denominated from their colour, the grey and the green; both productive, and (when separated from the skin that surrounds them) a food of excellent quality for man; wholesome, nutritive, and pleasant; and for cattle, whether in a dry or green state, much to be recommended. Sheep, cows, and horses, are particularly fond of them; and hogs are more promptly and economically fattened on a mixture of pea and barley meal, in a state of accetus fermentation, than by any other food.

The structure of the roots would indicate, that peas are an exhausting crop: and it is on this evidence, that in Europe they are admitted only in long, or six years rotations; but if we examine the leaves, in regard to both number and form, we will probably find reason to modify this opinion, and allow that by stifling weeds, by checking evaporation, and eventually by their own fall, they meliorate the soil, and render it more favourable to subsequent crops.

Following turnips, the preparatory labour for a pea crop, is not great. One, or at most two ploughings, will be sufficient. Sowing, as a general rule, ought to follow ploughing, without loss of time; and care should be taken, that the seed be not laid too deeply. The two methods, row and broad cast sowing, may be indifferently pursued. By the former, the seed is economised, the product increased, and the soil better tilled; but not, as some have supposed, with such decided advantage as to outweigh the saving, in time and labour, of the latter.

The length and feebleness of the stems of peas, and the little tendrils they throw out for support, indicate the advantage of mixing with them, other plants of more erect growth, which may prevent the peas from falling and lodging. For this purpose rye, oats and beans have been selected, and with great advantage.

This crop is employed either in a dry or in a green state; between which every farmer will select, according to circumstances. If the market for peas be brisk and high, he will in harvest, thresh and sell the grain; if on the other hand, peas are low and pork high, the moment the pods fill, he will turn in his hogs upon them, and with the following advantages: 1st, the hogs feed and fatten themselves, without any additional interposition of his labour; 2d, no particle of their manure is lost; 3d, the debris of the crop, refused by the hogs, is given back to the soil; and 4th, the rooting of these animals, which in other cases is an injury, is in this a benefit.

AGRICULTURAL PREMIUMS.

Agreeably to the plan adopted by the Albany (N. Y.) county Agricultural society, of granting premiums for the best and cleanest wheat, barley timothy seed, clover seed and flax, without regard to the quantity raised on the acre; the executive committee, together with several of the chairmen of other standing committees, met at the capital on the 4th inst. and after a careful examination of the articles submitted to them, they awarded the premiums as follow, viz:—

To Stephen Haines, of Cocymans, for the best 10 bushels of wheat, having 50 bushels more of the same quality in his possession, all being of his own raising, weight 62 lb. per bushel.	$14
To Ebenezer Dennison, of Bethlehem, for the second best, under the same regulations, weight 60 lb. 11 oz.	10
To Aaron Fullner, of Bethlehem, for the third best, under like regulations, weight 61 lb. 8 oz	8
To Aaron A. More, of Rensselaerville, for the best 10 bushels of barley, having 50 more of the same quality in his possession, all being of his own raising, weight 53 lb. 5 oz.	10
To Robert Bell, of Bern, for the second best under the same regulations, weight 52 lb. 10 ounces,	6
To Isaac Crary, of Bern, for the best bushel of timothy seed, having in his possession 5 bushels more of the same quality, all of his own raising,	8
To Gideon Dennison, of Bethlehem, for the best bushel of clover seed, having in his possession three bushels more of the same quality, all being of his own raising,	8
To Daniel Crary, of Bern, for 2d best do.	5
To Jonas Shear, of Cocymans, for the best 20 lb. of flax, having in his possession 100 lb. more of the same quality, all being of his own raising,	12
To Moses M. Stephens, of Coeymans, for the second best do. do.	8
To Ebenezer Dennison, of Bethlehem, for the third best do. do.	6
To Aaron A. More, of Rensselaerville, for the best acre of flat turnips, being 470 bu. 22 qts. to the acre,	10

The committee consider it to be due to those who did not receive premiums, to state the fact that between the articles offered by them and those which receive the premiums, there was scarcely a perceptible difference. This remark is particularly applicable to the articles of wheat and barley, both of which were of the very first quality. The grass seeds and flax were also excellent of their kind, and all taken together, evinced an attention to these branches of husbandry, very honorable to the farming interest of the county.

By order of the committee,
JOSEPH ALEXANDER, Sec'ry.

FOR THE AMERICAN FARMER.

Scheme of Premiums to be awarded at the Annual Fair of the Agricultural Society of the Valley, to be held near the town of Winchester, (Va.) November 12th, 1823.

The committee appointed by the Agricultural Society of the Valley, to report a scheme of premiums, to be awarded by the society to the most successful in the pursuits of Agriculture, respectfully report:—

That it is estimated by the committee that the disposable funds of the society will amount, before any distribution of premiums, to the sum of $300.

They therefore respectfully recommend that the following premiums be offered to candidates at the annual exhibition contemplated by the society:

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* *Miller's Bot. Off.*

† *Dioscorides, lib.* iii. *cap.* 165,

I. CROPS.

1. To the owner or cultivator of the best organized and improved farm in the Valley, containing at least 100 acres under cultivation, considered in relation—1st, to yards and manures; 2d, fences and general division; 3d, rotation of crops; 4th, orchard; 5th, live stock; 6th, implements of husbandry,	$30 00
2. To the owner or cultivator of the next best,	20 00
3. For the best crop of wheat on at least ten acres,	10 00
4. For the next best on at least ten acres,	5 00
5. For the best crop of Indian corn on ten acres,	10 00
6. For the next best,	5 00
7. For the best crop of potatoes on one acre,	10 00
8. For the best crop of mangel wurtzel on half an acre,	10 00
9. For the best crop of wheat on not less than two acres, and the best crop of corn on two acres and upwards, premiums discretionary with the committee.	
10. For the best crop of millet upon half an acre,	5 00
11. For the best crop of oats on five acres,	5 00

II. ANIMALS.

12. For the best bull over one and under four years old,	10 00
13. For the next best,	5 00
14. For the best bull calf under one year old, a silver medal valued at	2 50
15. For the two best milch cows,	15 00
16. For the best ram, in reference to carcase and fleece,	8 00
17. For the best boar,	8 00
18. For the best sow and pigs,	5 00
19. For the best yoke of oxen,	10 00
20. For the next best,	5 00
21. For the best stud horse kept in the Valley for six months previous to exhibition,	10 00
22. For the best raised by *a member* in the Valley,	15 00
23. For the best brood mare and colt,	10 00

III. MANUFACTURES.

24. For the best barrel of flour made of the smallest quantity of wheat, a medal valued at	2 50
25. For the best 20 yds. of woollen cloth, at least ¾ of a yard wide,	6 00
26. For the next best, same description,	4 00
27. For the best 20 yds. of flannel, 7-8 wide,	5 00
28. For the best carpeting, 20 yds. long,	6 00
29. For the best 20 yds. of bleached linen,	5 00
30. For the best 20 yds. of 6-4 diaper,	8 00
31. For the greatest quantity and variety of domestic manufacture made in one family during twelve months preceding the award,	10 00
32. For the best 50 lbs. of cheese made from one dairy,	5 00
33. For the best 25 lbs. of butter, a medal valued at	5 00
34. For the best bar share plough, a medal valued at	5 00
Extra premiums, to be awarded at the discretion of the committee, not exceeding, in the whole,	27 50
Total amount of premiums,	$300 00

When there is only one candidate for a premium, a discretion will be retained in the committee to refuse it, if the article does not appear worthy of it.

Every candidate for a premium must at the time be a member of this society, or one of the family of a member, and must make report under oath or affirmation.

Premiums will be awarded by the distributing committee for all kinds of domestic manufacture deserving them.

If any person shall make a false report or declaration on presenting an article for premium, he shall be expelled the society.

It is expressly understood that all premiums will be awarded in plate.

Those offering domestic manufactures, shall state the expense of making the article offered.

No crop shall be entitled to a premium, unless it shall amount to the quantity per acre following, that is to say: wheat 25 bushels; Indian corn 50 bushels; potatoes 250 bushels; mangel wurtzel, 500 bushels.

When a crop is offered for premium, the cultivator shall report to the society; 1st, The constituents of the soil, its situation, whether undulating or otherwise, and its preceding crop; 2d, The number of ploughings, harrowings, &c. &c.; 3d, The time of sowing, reaping, &c.; and lastly, The whole expense of tillage, including the value of manure applied. The whole of which shall be considered by the committee in awarding the premiums.

J. KEAN,
W. M. BARTON,
H. St. G. TUCKER.

April 5th, 1823.

* * *

To the Corresponding Secretary of the Massachusetts Agricultural Society.

DESCRIPTION OF A BRUSH FOR DESTROYING CATTERPILLAR'S NESTS.

Dear Sir,

For the last three or four years, we have here had very few caterpillars. Last week I observed an increased number, though not many, on my young apple trees. How to destroy them *most easily*, was a question which occurred as often as I have seen orchards infested with them; while I always considered it disgraceful to a farmer to suffer his trees to be stripped of their leaves, and their fruit, for that season at least, to be destroyed; seeing it was very practicable to get rid of them, and without much trouble, by crushing them, when small, with the fingers. This was my father's mode, when I was a boy. The same long, light ladders, which served in autumn in gathering his winter fruit by hand, enabled one to come at most of the caterpillars' nests in the spring. On this effectual example, I have myself practised, since I became a farmer. Some over delicate persons might object to this mode; but it is really far less offensive than the bare sight of large and numerous nests with which apple trees are sometimes filled. And if the operation be performed early, when the caterpillars are only from a quarter to a half an inch long, the operator, (man or boy) will feel no repugnance to the process. But in full grown trees, some nests towards the extremities of their small limbs would escape, because not accessible by ladders. A narrow brush, formed with small bunches of bristles in a single row, I once thought might reach and destroy them; but it was not found effectual nor convenient. Last Saturday morning the idea of the proper kind of brush occurred to me, and in the forenoon I tried it with complete success.

I presume every farmer has observed, that the clusters of eggs producing caterpillars, are laid round the slender twigs of the apple tree and wild cherry, and effectually guarded by a gummy covering, until vegetation commences in the ensuing spring. When first hatched, the worms appear about the eighth of an inch long. The same warmth in the air which opens the buds, hatches the caterpillars to feed on the embryo leaves. Their first object is to provide for themselves, a tent for shelter, in their new state, against the inclemencies of the weather. For this purpose, they crawl to a small fork of a limb, where the branches form a sharp angle; and there spin and weave a web with which they surround it, and where they are secure against undue cold and heat and rain. By this small white web they are discovered, and are then most easily destroyed. But the cluster of eggs are not all hatched at the same time. According to their situation for warmth or coolness, they are hatched some days earlier or later. At the distance, therefore, of a week or ten days after the first visit, an orchard should be again inspected, and all the latter broods destroyed. If neglected in this first state, they soon, by their growth, become straitened for room; and having also consumed the nearest forage, they march and take a new station, and there form a new and more ample tent. By such neglect the mischief of their ravages is increased, and they are with more difficulty destroyed.

The efficient and convenient instrument above mentioned, for this work, is nothing more than a common bottle brush fastened on the end of a pole. Having an old one in my house, I was enabled to make the experiment on the day when the idea of so applying it occurred to me. This brush is made of hogs' bristles, introduced between two stiff wires closely twisted: and being convenient in cleaning the insides of bottles, is probably familiarly known wherever liquors are bottled. For the information of others, I will mention, that a piece of wire full one tenth of an inch in diameter, about three feet long, doubled, and leaving a small loop in the middle, is closely twisted for the length of about eight or ten inches from the loop; and then the bristles, being introduced between the remainder of the branches of the wire, and these closely twisted upon them, the bristles are immovably fixed; and thus form (after being uniformly sheared) a cylindrical brush about six inches long and two and a half in diameter. To fasten this conveniently to a pole, with a small gouge, I made a groove about seven or eight inches long at the small end of the pole, in which nearly all the handle (the naked portion of the twisted wire) of the brush was laid, and bound on with three strings.

In using the brush, press it on the small nest, and turning the pole in the hand, the web is entangled with the bristles, and removed: otherwise, you rub the fork of the limb, inside and outside, with a brush, when nest and worms are surely killed or brought down. That the experimenter may see its mode of operation, he may apply the brush with his hand to a nest within his reach. Spruce poles are eligible, because that wood is light and stiff. For my small trees, I found a common bean pole (used for running beans to climb on) six or seven feet long, sufficient; and for them a longer pole would be inconvenient. For taller trees, poles proportionably long must be provided.

If you are satisfied by my account, of the utility of this simple instrument for destroying caterpillars, you may think it proper immediately to make it publickly known. Should the description be more minute than is requested for communicating a clear idea of it, and its application, you will abridge it.

With very great respect and esteem,
I am, dear Sir, truly your's,
TIMOTHY PICKERING.

* * *

From Willich's Domestic Encyclopedia.

Cisterns are vessels employed for the reception of rain, or other water, either under ground, such as those of navigable canals, &c. or above ground, for domestic and other purposes. In this place we shall treat only of the latter. In London the cisterns are of lead.

As the water collected in leaden cisterns is apt to corrupt, either by stagnating for several days, when the pipes happen to be obstructed, or by the deposition of feculent matter, as well as the incrustation formed in such vessels, it follows that they ought to be frequently cleansed of the copious sediment they contain. This attention is the more necessary, as *lead* is a metal liable to be dissolved by acids; and, in that state, proves a slow, but fatal poison. Although the acidity contained in stagnant water, which has, in its course, been impregnated with animal and vegetable particles, cannot be very considerable, yet it will be more safe, and prudent, to prevent the formation of such acids, by an early attention to the purity of the water.

The deeper cisterns are, the better the water will be kept. Where the ground is not so bad as to require a round form, a cube is a good figure: a double cube must be better, as it gains depth and consequently coolness. A cistern of six cubic feet, holds 16 hogsheads of 100 gallons each, or 26 hogsheads. A double cube of five feet would hold above eighteen rum hogsheads of one hundred gallons. The pit should be dug exactly by square and plumb. On the face of the pit, lay potter's-clay, plasterwise, with a trowel, coat over coat (as it dries and cracks) two or three inches in all. Against this firm even face of plaster raise the brick or stone work. Bed the bottom, three or four inches thick with strong clay, beat to a smooth, even surface. Moisten the clay, and beat it with switches, or small hoop poles, but with nothing heavy. On this clay-floor, lay a double bed of brick: and, on the margin of this, carry up the side walls half brick thick, laying them in terras. Cover the cistern over, but leave room to fix a small pump, which must be two feet from the bottom: or a roller and bucket may be used to raise the water.

The above directions are taken from Mr. Bordley's Essays and will answer where lime cannot be had to make Mr. Hunn's cement, before noted. In many places of Europe, rain-water saved in cisterns is the only water drank. Stolberg says, he drank some in the vicinity of Naples, near three years old, and found it excellent. Mr. Bentham has lately taught us, that water may be kept during the above period perfectly sweet. On the flat coasts of the United States, these rain-water cisterns ought to be generally built: for the water from the ground is very bad, and occasions many of the disorders attributed to other causes.

[The mortar or plaister for cisterns, should be made of lime *well and recently* burnt, with the admixture of one fourth of terras, ochre, ground iron ore, or smithey slack, (the dust of a blacksmith's shop)—T. C.]

Anciently there were cisterns all over the country of Palestine. There were some likewise in cities and private houses. As the cities for the most part were built in mountains, and the rains fell regularly in Judea at two seasons of the year only, in spring and autumn, people were obliged to keep water in their cisterns in the country for the use of their cattle, and in cities for the convenience of the inhabitants. There are still cisterns of very large dimensions to be seen in Palestine, some whereof are 150 paces long and 54 wide. There is one to be seen at Ramah of 32 paces in length, and 28 in breadth. Wells and cisterns, springs and fountains, are generally confounded in Scripture language.

From Nicholson's Philos. Journal, vol. 22, p. 354.

Account of a well for preserving and filtering Rain-water for domestic purposes, where a supply of Spring-water was not easily to be obtained.

SIR, TO MR. NICHOLSON,

You may perhaps deem the following account of a filtering rain-water well, which has been successfully tried here by the Earl of Caernarvon, not undeserving of notice in your valuable Journal. His lordship has lately erected upon a dry gravelly eminence in his park, an ornamental circular building, consisting of a room and open colonades above, and apartments for cottagers upon the basement floor. Considerable discussion arose upon the mode of supplying them with water, from the depth to which it was necessary to sink, in order to obtain an effective well. My friend, Mr. John Loat, builder, of Clapham, who had furnished the plan, for the construction of the dome roof, mentioned to me a contrivance of his father's to meet a similar difficulty, which had been attended with invariable success, and Lord Caernarvon immediately determined upon carrying it into execution.

Following Mr. Loat's instructions, we sunk two wells, 30 ft. deep by 4 ft. diameter each, which for greater perspicuity I shall call No. 1 and 2. They are a trifling distance asunder, and were carefully clayed, to prevent percolation into the surrounding soil, and lined with bricks in the usual manner. A well secured communication was made between the two wells, by a small leaden pipe inserted two feet from the bottom. All the pipes from the roof were directed into No. 1; and an oak floor, bored full of small holes, and supported upon posts, was laid in at No. 2, just above the pipe of communication. Upon this floor was first placed a stratum of well washed coarse gravel, then one of finer, next a stratum of coarse sand, and finally one of the finest sand we could procure, making altogether two feet in thickness of silicious substances. The water, which is received into No. 1, passes through the leaden pipe into No. 2. and filtrates by ascent through the strata of sand and gravel, the space below the level of the oak floor in both wells, acting as a cespool, receives all sediment. The pump is of course affixed in the filtering well. Both wells are covered up, but plenty of air is admitted to them, through apertures made for this purpose.

You will immediately perceive, that the merit of this plan consists altogether in the filtration by ascent, with a competent space under the apparatus. The interstices of the sand are thus never clogged, and its power is preserved unimpaired for an indefinite period. The well fully answers its intended purpose, and the water is altogether excellent. I have been tempted to submit this statement to you from a persuasion that there are few houses, which may not be made in this manner to supply excellent water in sufficient quantity for domestic consumption; and that situations abound, where the filtrating well may be resorted to with equal comfort and advantage.

I am, Sir, your obedient humble servant,

J. R. GOWAN.

Highclere, Newbury,
Berks, April 1, 1809.

FROM THE NORTH AMERICAN REVIEW.

GEOGRAPHY OF PLANTS.

The geography of plants is one of the most curious instances of the connexion of the various arts and sciences with each other. Far from being a topic which ought to be assigned exclusively to the botanist, the subject of the localities, of the original country of plants, and the regions to which they have been transported, is one of the most precious documents for tracing the descent, the affinity, and the emigration of ancient nations. Books, we have few, one might rather say none, which acquaint us with the *primitive* fortunes of our race.—Plain reading and writing, handy as we are at them now-a-days, are things of which the majority of men, taking the ages of the world together, have known nothing. We speak not now of the old and somewhat arbitrary division of the barbarous and civilized; but the people that built the pyramids and the temples of Thebes, knew nothing of what we call reading and writing. Their hieroglyphics were in the hands of the priests, and besides were about as much of a popular science as the intregal and differential calculus at the present day; with the advantage in favour of the latter, that all who have the intellectual capacity to learn it, have the means, while the hieroglyphics, were its sacred mystery. The Assyrians, Chaldeans, and Persians, at the most flourishing periods of their politics, cannot have had any other kind of writing. There is no proof of any thing among them more commodious than the arrow headed character, of which the construction excludes every thing like a popular use. It may have served the purpose of religion and the state, and had been, perhaps associated with astronomical hieroglyphics, to record some observations of the heavenly bodies. No one who has ever looked at a Babylonian brick, or drawings of the Persepolitan ruins, can suppose, that it extended its use to the common purposes of life. But this is to speak of the most ancient days, and distant regions. The Trojan war has been fought, all the Grecian cities founded, and the laws of Lycurgus established, before the Greeks learned to read and write; and prose is so modern among them, that we can show the period of its origin. With the Romans, as with the Etruscans before them, writing was a mysterious art, in the hands of the priests, till the intercourse between Greece and Rome was established. Nor is it probable, that in common life, any extensive use was, at any time, made of the art. In the middle ages of Europe it was still less practised. Charlemagne himself was awkward at it, and set up schools, that his subjects might be better taught than their master. Even at the present day, if the human race were to pass in review before us, for one who could read a book, there would be about ten to whom it would be sad waste of fair rags. That almost idolatrous preference, therefore, which we give to written documents above all other means of information, has, as far as the oldest antiquity is concerned, little foundation in justice, and is much to be deplored when it leads us to neglect more permanent documents of the history of our race. It is not in the form of books, that languages themselves are the best witnesses of the *most remote* antiquity.

The coincidence of the structure and vocabulary of languages carries us much farther back, than any record they contain, for the reasons, that the oldest records have perished, and still more, because men spoke long before they wrote, and ages on ages of speaking men, to whom writing in all its forms was unknown, transmitted their language to posterity. But language, in any application, is but one of the monuments, that survive the transitory generations of men. Their works and their institutions, their superstitions, and their ceremonies, in various forms, outlive them; and it is not without example, that the lineaments of the face descend, for thousands of years. Let men but make some progress in civilization, and they divide the starry heavens into arbitrary signs, of which the tradition travels down to the latest posterity, which establishes a connexion between the Hindoo, the Egyptian, and the Greek, anterior to any other record of it, and leave a memorial in their lunar houses and solar aspects, for ages after marble and paper are alike reduced to dust. This observation had not escaped philosophers. M. de Humboldt has called the attention of those who love to study the history of man, not in the genealogy of kings or the tale of battles, but in its grand features of humanity, to another most elevated and attractive speculation. Most of the vegetables, which serve for the nutriment of man, the grains, the roots, the berries, which make up his food, have undergone migrations with the human tribes, and in passing from region to region, and climate to climate, have gone through various stages of developement and improvement. On an extensive collection of facts of this kind, notices of native places, the transportation, the improved form, and the use for food of the cereal vegetable, the potato, the palm, &c. M. de Humboldt has founded the most ingenious historical conclusions, and taught us, that if in one series of observations, the history of our race is written in the heavens above us, it may be traced in another on the surface beneath our feet. The essay on New Spain contains a number of speculations of this kind, of the most curious nature, that are more particularly pursued in the work before us; which is completed, and itself an independent and separate work.

* * *

The following letter has been handed to us for publication.

MIDDLEBURG, (Md.) 2nd May, 1823.

Dear Sir—In compliance with the desire that you have expressed in the last communication, that I have had the pleasure of receiving from you, relative to the fact of certain vegetables possessing the power of locomotion; I shall, in as succinct and comprehensive a way as the nature and elucidation of the subject will admit of, proceed with the following observations, which, I hope, will be considered sufficiently satisfactory upon the subject.

The power that animals are in possession of, by which they are enabled to move themselves from one place to another, is by very many supposed to constitute the difference between animals and plants; and it certainly, in the generality of instances, is the most correct criterion by which we distinguish the animal from the vegetable kingdom. But although every animal possesses, in a greater or less degree, the powers of locomotion, yet, nevertheless, the intelligent botanist is fully persuaded of the fact of certain plants having an inherent disposition in them to shift themselves from situation to situation, whenever they are placed in a position that is more or less unfavourable to the process and progress of vegetation. Plants, when forced from their natural situations are endowed with a spontaneous, and perhaps a voluntary power of recovering themselves. It is perfectly well ascertained, that they are endowed with life, and consequently subject to decay and death. They are doubtless sensible to the action of nutriment, air, light, and to every thing that excites an impression that is congenial to their rapid growth; or that may be calculated to produce destruction upon a part only, or upon their general organization. The unfolding and closing of many flowers at stated times, cannot but be considered as a proof sufficiently satisfactory of the truth of this sentiment. But to advance a little further. It is well known to the most superficial observer, that all the species of the sensitive plant, upon the slightest touch folds up its leaves similar to the snail, which, upon receiving the least impression, retires within its shell. There is one particular species of this interesting genus of plants, the *Dionæa*, the flower leaves of which, if a fly light upon them, closes instantaneously and crushes the insect in a moment to death. A hop-plant twisting around a stick, will, upon examination be invariably found to direct its course from south to west, as the sun does: turn it in the contrary direction and secure it in this position, and it dies. Leave it loose in the contrary direction and it will recover itself in the course of a single night. The root of a tree meeting with a ditch in its course, becomes exposed to the open air, the consequence of which is, it pursues a different direction like an intelligent being, plunges into the earth, surrounds the ditch, ascends upon the opposite side, and then proceeds on its former course. If a wet sponge be placed near a root that is exposed to the air, the root will alter its course, and direct itself to the sponge, shift the sponge to another situation, and it will alter its course again. If a pole be placed at a moderate distance from any chimney plant, it will direct its course to the pole, lay hold of it, and ascend to its usual height; and so of many others that I might at present mention. But I presume that the instances that I have already cited in support of the power of locomotion in vegetables, will be sufficient to satisfy your mind on this subject. I must now close with this communication by observing to you, that I shall always, with the greatest pleasure imaginable, give you any information connected with this department or branch of natural history. I have the honour to be, Dear Sir, your obedient servant,

W. ZOLLICKOFFER.

Miscellaneous.

FROM THE LONDON FARMERS' JOURNAL.

ON WHEELS.

Evesham, Sept. 14, 1822.

Sir,

In your Journal of the 9th instant, I perceive you have "selected an article" from the Georgical Essays, "to revive the subject of Cylindrical Wheels." As you have begun afresh this controversy, I trust you will not let the subject again subside until you shall have converted those who differ from you, or *vice versa;* and, whatever the result may ultimately be, let it be a *sine qua non* with the advocates for or against them, that all theory shall be brought to the test of experiment, with *carriages in common use*, upon *real roads:* and give me leave also to recommend all writers upon the subject, in your columns, to appear under real signatures.

In my letter published in your Journal of the 19th of June, 1820, I referred to the extensive, and I may say, exclusive use of cylindrical wheels by the Duke of Portland, at Welbeck, Notts. where they have answered perfectly, though of different dimensions, and from three to fifteen inches in breadth. Why the same success has not attended the North Britons, where you say they have failed, I cannot determine, but depend upon it, it will not be found to be owing to the principle, but somewhere in their mal-construction.

I have, since the date of my last letter, continued my researches, and made many experiments, which have invariably induced me to hold the cylindrical wheels in the highest estimation.

I have noticed several times in your Journal, a hint, which in the Number before me I find repeated, thus—"It is impossible" you say "for cylindrical wheels to run flat on the sole, and with equal pressure on roads which form (as all ours do) segments of circles." However mathematically correct as the solution of a problem, nothing of the kind will be perceptible with actual wheels upon our roads, and which, if they are segments of circles, I hope ere long to see altered by a legislative enactment, into the segments of a flat ellipsis. I should still have remained silent upon this subject, if the Highway Committee had not abandoned in their last bill the plan of flat soles, as introduced in their former bills of 1820 and 1821. The moment I discovered the alteration in their bill, just now passed into an act, I hastened to offer my evidence, but found it too late, their report having been previously made. In the act in question, page 4, folio 9, 10, is an enactment to prevent wheels six inches in breadth, from deviating more than half an inch from a flat or level surface, or more than one quarter of an inch from a flat surface in wheels less than six inches in breadth; or in case the several nails of the tire of such wheels shall not be so countersunk as not to project above one quarter of an inch above the surface of such tire, which enactment is followed by a clause for the encouragement of cylindrical wheels with flat soles and countersunk nails. By still allowing barrelled soles and projecting nails, it appears as if the framers of the bill had an idea that *dished* wheels could not be made or *used* with flat soles, and the universality of this opinion has, I believe, been the chief obstacle to their general and immediate improvement: but the *fact is*, that notwithstanding the mathematical truth, that the lesser circumference of the conical wheel in a certain degree twists, or drags, when going in a straight line so as to keep pace with that part of the wheel rolling upon a greater circumference, yet such dragging or twisting, *does not* injure any road if the wheel is correctly flat upon the sole. In comparing the effects of the cylindrical and the conical wheel, when at work, little or no difference can be discovered; but between them and the barrelled soles with nails, deviating one quarter of an inch only, the superiority of both the former will be striking indeed. Cylindrical wheels could not be suddenly and exclusively brought into use without great injustice to individuals, but may be introduced gradually as new wheels are required, at an expense not exceeding any other sort, and in the mean time the common dished wheels may be so altered as very nearly to approach the perfection of the cylindrical wheel,[*] at the trifling expense of 27s. per pair. The alteration I have made upon many of the common wheels of the country, which are always more or less dished, and have barrelled soles, has been to remove the tire, cut down the sole to a flat and even surface, to rework the tire, and countersink the nails, at an expense 13s. 6d. each wheel, as above stated. All that the most enthusiastic improver of roads can wish the legislature to do with respect to wheels, is to encourage the least injurious wheel, viz. the broad cylindrical one, which is at the same time the strongest[†] and the easiest of draught; to fix a minimum for the breadth of all wheels according to the number of horses drawing the same; and that every wheel, of whatever description, shall be flat on the sole, and that the nails of the tire shall be so countersunk as not to rise above the surface; or in other words, re-enact the 69th section of the 13th Geo. III. c. 84, which was unfortunately repealed by the 16th Geo. III. c. 39, before the time fixed by the framers of that excellent statute to take effect, under the mistaken apprehension that the provisions relating to flat soles and countersunk nails, would be "attended with great inconvenience." My experiments have been made with cylindrical and conical wheels, flat and barrelled soles, countersunk and projecting nails, travelling with very heavy weights over almost every variety of road, from the native soil in deep ruts to the well consolidated and smooth modern road. The weight above alluded to was on six-inch carts weighing, when loaded, three tons four hundred weight each. These have not been experiments of an hour, or a day, but of continued labour for many months,[‡] not less than six thousand tons having been transported upon cylindrical and conical wheels alone, finding it requisite to discard the barrelled sole altogether, not only as destructive to the roads, but to the wheel itself; for it is the nature of the barrelled sole to be eternally upon the rock even upon the smoothest road, while the former consolidate and improve, and by their attrition bring a road into such a state of perfection as cannot be obtained without them, no more than the beautiful smoothness of a coach pannel can be produced by the painter without the aid of his pummice stone.

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[*] *Mr. S. here delivers the whole truth, and admits all that need be contended for; that is, if wheels be dished only as much as strength requires, they will run as well as cylindrical ones.*

[†] *The stronger it may be for perpendicular pressure, but not in wear with time.*

I shall be most happy to give any explanation; or give me leave to say, I shall be glad to see you here, or any other gentleman interested in the general improvement of the roads throughout the kingdom, in which case I would exhibit the different wheels and their effects upon the roads, or make any experiments with them that might be suggested.

I beg to remain, Sir, your obedient servant,

JOHN ALLEN STOKES.

HEAD ACHES AND APOPLEXY.

(*From a Medical Work, entitled "Farmer on Head Aches," &c.*)

"The alarming increase of apoplectic fits for several years past, has naturally given rise to the question—What do they proceed from? Various opinions have been given by writers on the subject, but none appear to be satisfactory.

"Now, from all the consideration I have given to the subject, and coupling it with many corroborative circumstances, I find no hesitation in coming to the conclusion, that the prevalency of apoplexy is owing, in a great measure, to the introduction of the custom of wearing cravats. This observation will appear less extraordinary, when we call to mind the fact that this addition to our dress was not adopted until the 16th century, previous to which period, the disorder in question was met with but as one to three compared to the present. In that day the neck was divested of every kind of covering, except a slight frill, which contained no warmth; and, instead of detracting from dignity, it added much to the majesty of the countenance. A mere shirt collar was worn on the neck by some people, but it did not operate in augmenting vascular action there.

"But I find another proof of the feasibility of my remarks, by the circumstances of females being less liable to apoplexy than the opposite sex, although the nature of their economy might be supposed to lead much oftener to the complaint. Now we find that their necks are not enveloped in padded ligatures, and consequently the proportion of sudden deaths amongst them is much less than in men.

COMMUNICATION.

Mr. Editor,

I observe in your paper of the 21st inst. an extract from the "Harper's Ferry Free Press," stating that on the 28th of June, 1824, and 20th July, 1860, there will be "total" eclipses of the sun.—Now this is rather too wantonly sporting with the curiosity of those who are looking for wonders in the skies—for, there will be no eclipse at all on either of those days—June 26, 1824, there will be an eclipse of the sun, about sun set, but not visible here; also July 18, 1860, the sun will be about one half eclipsed.

The *astronomer* who furnished that article for the "press," had heard of the "Chaldean Period" of 18 years and some odd days and hours, when the same eclipse returns again, (and the two eclipses abovementioned are the first and third returns of the great eclipse of July 16th, 1806,) and he probably *wisely* concluded that the second return in 1842, would be invisible, because it would happen in the *night*. But he may yet learn, that eclipses of the sun appear very different, and are "total" or not even visible, depending entirely on the time of the day when they happen, and the situation of the observer—he may also learn to make proper calculations for Leap Years.

Were I to foretel the next "total" or central eclipse of the sun, I should say February 12th, 1831, about one o'clock, P. M. the sun will be centrally eclipsed, in the latitude of Boston, exhibiting a luminous ring. D. C.

Bethel, Vt. April 25, 1823.

FOR THE AMERICAN FARMER.

CURE FOR THE GRAVEL.

MR. SKINNER, SIR,

When we take a daily paper in hand, it is generally for the purpose of discussing the politics of the day, or noting the price of stocks: both pass away as the Ephemera. But when in company with the *American Farmer*, "we read, mark, learn, and inwardly digest" its valuable communications. I often copy receipts from it. and am inclined to measure "other people's *corn* by my own bushel;" and think the following receipt may be of as much service to suffering humanity, as one for making the Hamburgh pickle Should you be of the same way of thinking, it will find a place in your valuable paper.

Having been much troubled with the gravel, I was advised by a Mr. Zane, of this city, to try a decoction of wild carrot, Daucus Carota. I made a tea from the stalks and seed, with a few water melon seed, and drank about a quart a day; it is as palatable as China tea, when sweetened with sugar or honey. In less than a month from my first using it, I passed a stone 3-8ths of an inch long and 3-8ths circumference, of an egg-like form. I have ever since, when troubled with any pain in the region of the kidneys, taken a strong tea of it for my common drink, through the day, and always found relief. I take it with my children for breakfast, once a week—they make no objection to the taste.

This is a remedy that is to be found by every farmer on his own lands; and cannot well be mistaken, from its great resemblance to the culinary carrot seed and flower. Mr. Casey, Seedsman, Hanover-st. called to my recollection, a medicine used by my father, composed of beards of leeks, birch twigs, pennyroyal and wild carrot—ad libitum—but a compound is not so easily procured as a simple, which alone, often causes the receipt to be passed over.

Your's respectfully,

WASHINGTON SPENCER,

98, *Granby-street.*

May 18*th*, 1823.

HYSON TEA.

The fact has been demonstrated, that the genuine hyson tea may be successfully cultivated in this state. The experiment has been tried, and the result has been most satisfactory. A lady, the wife of Mr John Newland, of Chatham county, found a seed much resembling that of buck wheat, in the bottom of a box of tea which her husband had purchased in this town. She planted the seed in her garden and the produce was a splendid crop. She gave some of the seed to Mrs. Farrington, the lady of Mr. John Farrington, of Chatham county, who also planted the seed; and the writer of this article obtained his information from Mrs. Farrington, and also obtained from her some of the tea and seed.—He planted the seed in his garden, in this town, where it can be seen by those who are curious to witness the products of the East Indies transferred to this western hemisphere.

The writer of this article has distributed, of the small portion of the seed obtained by him, to many of his friends in this town and its vicinity.

A treatise on the mode of curing this valuable plant is quite desirable.

Fayetteville, (N. C.) May 20, 1823.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 6, 1823.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7 25 sales—White wheat, $1 52 to 1 55—Red do. $1 45 to $1 50—Rye, 75 cents—Corn, 50 to 52 cents—country Oats, 40 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $3 per bbl.—No. 2, $2 75—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, 20 to 25 cts per lb.—Eggs, 12½ cts. per doz.—Hay, $17 per ton—Straw, $10.

TOBACCO is selling nearly as per last report.

FOR SALE

At a low price and on a long credit, the FARM on Elk Ridge, occupied by Mr. H. Scott, and formerly owned by Luther Martin, Esq. containing about eleven hundred acres.

It is situated about eleven miles from this city, near the Washington road, and is considered remarkably healthy—The situation is handsome, and the land easily improved by plaster and clover. This property will be divided if required, and immediate possession given—For terms apply to

ROBERT & JOHN OLIVER.

Printed every Friday at $4 per annum, for JOHN S. SKINNER Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

[‡] *Not* months, *but years of labour must prove wheels. A good pair of dished wheels will last a farmer near twenty years with repair. Will cylinrical wheels work safely till they are as old?—Experience says, No.*—Edit.

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE, TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

No. IV.

The public would be great gainers, *were they to lay out upon the making of every mile of Canal,* twenty times *as much as they expend upon a mile of Turnpike road; but a mile of Canal is often made at less expense than a mile of Turnpike.*

29. In support of this very important proposition, it may be proper, in the first place, to state that it has in its favour the authority of Rees's celebrated Cyclopedia, because it is an exact quotation from that elaborate work. But in a matter of the utmost importance, such as the present, to many, at least, it would be abundantly more satisfactory to enter into a *minute* investigation of the *reality of the fact*, rather than implicitly to depend upon any authority, however respectable. While we remain unacquainted with the truth of a proposition from our own knowledge of its certainty, the knowledge of others will never enable us clearly to comprehend it. Under these views, I have, with the most scrupulous attention to accuracy, collected, either from the writings or the personal information of men of the most extensive experience the series of evidence which is the basis of the following calculations and conclusions.

30. From the evidence with which I have been thus furnished, two facts appear to be clearly develeped: One, that a man, a boy and a horse, can, with facility, transport a 25 ton boat and its cargo 20 miles a day, upon a canal advantageously constructed with towing paths; the other, that first rate five horse teams do not usually travel more than 20 miles a day, nor carry *more* but *less* than two tons and a half upon a turnpike of the best description. Hence it follows that ten such teams would be required to convey 25 tons as far in a day as the same weight would be taken by the man, the boy and the horse. By a person of extensive experience I have been informed that the first cost of a new turnpike waggon and its appendages, admitting the tread to be four inches and a quarter, so as to pay but half toll, is frequently as high as $200, and may be accounted low, when rated at $190; that such a waggon, in constant use, if substantially made, will last about 18 months; that $60 will then be required for new tire, which with about $10 for incidental charges, may be expected to hold out a second 18 months; that in the next place, in addition to $60 for new tire *again*, and $10 for other charges, $16 will be required for new rimming the wheels; that at the end of the third term of 18 months a general repair may be anticipated amounting to $60 for new tire, $25 for new axle-trees, new bolsters, &c. with their respective irons, and about $5 for incidental repairs during the fourth period of 18 months; that having now in the course of 6 years cost about $436, the best plan would be to sell it, to be used on a farm, and for the value of the iron, for, perhaps, from 40 to $50. Should the owner succeed in realising a sale at $46, the remaining cost for six years, would be $390, for one waggon, and for an outfit of ten waggons $3900.

31. Waggon horses, for constant service upon a turnpike, would require to be well selected. For heavy draught they would require to be stout and strong, and in the prime of life, in order to be durable. Upon inquiry being made, respecting the price of such horses it appears, that, they usually cost from 120 to $130, or higher; but I will adopt $100 as a moderate estimate. It is also stated that a set of new harness would cost about $10, and its repairs in six years, including the new collars that would be necessary, as much more, at least. Thus each horse and his harness would cost $120, and an outfit of 50 horses and harness, $6,000, to which let $3,900 be added for the before mentioned outfit of ten waggons, and the sum $9,900 will be the required outfit for the turnpike.

32. Let inquiry be now made as to the durability of the horses. In McAdam on roads, printed by J. Robinson, Baltimore, 1821, page 86 to 92, it is stated on the authority of evidence that was given before a Committee of Parliament, that *a stock of* stage horses will *fully wear out* upon the roads near London *in three years*; but, that, at a distance from town where the work is lighter, and the roads as well as the food, stabling and lodging of the horses better, they are calculated to last *six years*. No mention is, however, made of any situation so favourable as to extend their duration beyond that period. Hence it may very rationally be inferred, that, waggon horses, constantly engaged in drawing heavy loads upon a turnpike, where the opportunity of their being supplied with good food, or a sufficiency of any kind, is often precarious, and where, instead of being in a comfortable stable during the night, (as is usual for stage horses,) they are exposed, destitute of any shelter, to all the injuries incident to the most inclement seasons, would not hold out longer than four years and a half, the average of three and six years, the two extremes above mentioned.

33. Again, according to the evidence of waggoners, and of persons of experience in the vicinity of Baltimore, turnpike teams of five horses, hauling two tons and a half, would not last longer than five years. It is understood that one horse, *at least*, upon an average, would be annually required to supply the places of those that should die, or otherwise become incapable of service. But in the foregoing instance from three to five years appeared to be the general estimate of the durability of a turnpike waggon. That the error, however, should there be any on either side, might be certain to be in favour of the turnpike, and not of the canal; I there made choice of six years in preference to five—for the same reason I have in this instance also concluded to adopt the term of six years; and having in conformity with this conclusion divided $9,900 the aforesaid outfit by *six* instead of *five*, the yearly cost of outfit is $1,650, instead of $1,980; making an annual difference below what the general estimate would warrant of $330 in favour of turnpike conveyance.

34. The waggoners would require to be trustworthy persons, and being understood to find themselves, their wages cannot reasonably be estimated at less than $30 per month, that is $360 *each* per year, or $3,600 per annum for the *ten*. Upon turnpike roads where there is a great concourse of waggons, it is obvious that horse feed would, in all probability, be high. According to the evidence in this respect, the cost of each horse in 24 hours is usually from 62½ to 75 cents, and sometimes a dollar. But, for the reason before mentioned let 50 cents be taken as the average estimate, at which the yearly cost of each horse will be $182 50, and of 50 horses $9,125. By the evidence before me it further appears that each horse, upon an average, would require a new set of shoes every six weeks, or about 16 pair a year, which, at 50 cents a pair is $8 per annum for one horse, and $400 for 50 horses, with which, $594, that is one year's interest on $9,900 the turnpike outfit before mentioned (31) will require to be included.

35. The canal outfit would consist of a 25 ton boat, say 75 feet long and 9 feet beam, which at $2 per foot would cost $150. Owing to the comparatively light draught, that, for only twenty miles a day, would be presented by the boat, it may be fairly presumed that a horse equally competent to the performance, might, with greater facility, be purchased for $80, than a waggon horse of the superior strength required for $100. Owing again to the canal-horse having to travel on the smooth surface of a towing path instead of a turnpike, it may be further presumed, that his harness would cost much less, and his shoeing not more than half as much as the harness and shoeing of a waggon horse. But having before determined (33) that, should any thing, *unintentionally*, be either *over* or *under*-rated it should not operate in favour of the canal, but of the turnpike, I shall rate both these items at the same cost that has already been adopted for those of a waggon horse. Hence $150 for the boat, 80 for the horse, and 20 for his harness, will together amount to $250 for the cost of the canal outfit. Owing also to the turnpike wear and tear being abundantly more severe than that of the canal, the inference appears to be well founded, that this outfit would be quite as likely to last 8 or 10, as that of the turnpike 5 or 6 years. But for the reason before assigned I shall in this instance also adhere to the time of *six-years;* and hence *one sixth* of $250, the sum above stated, will be $42, *nearly*, the yearly cost of the canal outfit.

36. The *boatman*, it is true, ought to be equally as trust-worthy a person as a *waggoner*, but owing to the facility with which he may always take his needful accommodations in the boat, and by that means live nearly as cheap as at home, there is great reason to believe that $25 per month, that is $300 per annum, would be better for him than $360 for a waggoner, under the *disadvantages* of being almost continually upon the turnpike. The boy's compensation, being usually estimated at half that of the boatman, will be $150; and owing to the ease with which horse feed may be laid in, *upon the best terms*, and carried in the boat, $100 per annum, (which is understood to be the cost of keeping waggon horses in the vicinity of Baltimore,) is believed to be an ample allowance for the cost of the canal horse, with which it will be necessary to include one year's interest, $15, on $250, the canal outfit before fore stated (35).

37. Having thus prepared the different items of charge on both sides, let them now be arranged together in one distinct view, to wit:

Charges on the Turnpike.

Annual cost for outfit	$1650
Hire of ten waggoners	3600
Keeping and shoeing of 50 horses	9525
One year's interest on 9,900	594
	$15,369

Charges on the Canal.

Annual cost for outfit	$42
Boatman's wages	300
Boy's compensation	150
Keeping and shoeing one horse	108
One year's interest on $250	15
	$615

38. In the next place let $15,369 the sum of the turnpike charges, be divided by $615 the amount of those of the canal, and the quotient being 25, it follows with all the certainty of correct calculation, founded upon clear and substantial evidence, that money appropriated and expended to the best advantage in the opening of

a canal, is expended in such a manner, as to be twenty-five as beneficial to the public as the same sum could be, had it been applied to the making of a turnpike road.—Q. E. D.

39. The last words of the proposition, stating, that, *a mile of canal is often made at less expense than a mile of turnpike*, is intended to be explained in my next number. But *at present*, it may be proper further to observe, that, as the toll *usually estimated* to be charged upon a canal is only *one cent per ton per mile*, or $5 for 25 tons 20 miles, and that which is commonly collected upon a turnpike is twelve cents and a half for each horse the same distance, that is $6 25 for 50 horses 20 miles, the turnpike toll exceeds that of the canal for equal weight and distance, 25 per cent. For further illustration, however, let it be admitted that this difference did not exist in favour of the canal; that on the contrary, the tolls in both cases were equal, and that the cost of the one was also equal to that of the other; then, by subtracting $12,300, that is 20 times the canal charges, from $15,369, the remainder, $3,069, will be a clear surplus annual gain to the public, exclusive of the twenty-fold advantage that was proposed to be proved. The toll of 25 tons for passing 20 miles along the canal has already been stated to be $5; or in other words, the toll per day is $5, that is, $1500 for 300 days, or a year, were the boat to be so many days upon the canal with a full cargo on board. To this yearly toll add $615, the yearly charges, and the sum $2,115 being taken from $3,069, the surplus annual gain before mentioned, there is still a remainder of $954, which proves not only the reality of the proposed twenty-fold benefit to the public, but also of the sum last mentioned remaining for incidental purposes, exclusive of an amount, equal to that of all the *anticipated* charges for *freight and toll* into the bargain.

WILLIAM KENWORTHY.

AGRICULTURE.

TO THE EDITOR OF THE AMERICAN FARMER.

ON THE CULTURE AND DRESSING OF HEMP AND FLAX.

New York, 24th April, 1823.

Dear Sir,

Agreeably to the promise which I made you some time since, I herewith send you a communication from a friend, upon the subject of preparing flax and hemp; and altho' my experience does not enable me to corroborate all of this gentleman's statement, yet, from his judgment and respectability, I have the fullest confidence in their correctness—And if what he has so clearly and confidently stated, be correct, what is to prevent our country, within a very few years, from largely exporting what we are at present compelled to import from the interior of the frozen regions of Russia? It has been stated to me that the hemp which we import from Russia, is, in many instances, brought from one thousand miles in the interior. That it is two and three years getting from the spot where it is produced, to this country, and that it must consequently, in almost every instance, become more or less damaged. It is a fact perfectly well established, that every part of our extensive continent, and particularly the north and the west, are admirably adapted to the culture of both these articles. Our rich bottom lands, and even our hills are as well calculated for them, as any other part of the globe; and, the only difficulties hitherto felt upon the subject, have been the unpleasantness and difficulty of water rotting, and the almost insuperable one of dressing them afterwards. The latter, however, is universally admitted to be the most appalling—The machine which Mr. Goodsell has recently invented, has fully and completely removed this objection. The dressing, which comprehends the breaking and scutching of flax and hemp, is now performed with so much ease and expedition, that what was formerly considered a servile and excessively laborious occupation, and performed by slaves only, or the lowest class of labourers, is now considered as light, and not by any means unpleasant—After having succeeded in contriving the only machine that I have ever seen or heard of, in this or any other country, that deserves the name of a flax and hemp dresser, Mr. G. was naturally led to the investigation of the important subject of preparing them for the machine, by the trials which he made, and the conclusions which he has drawn: I am induced to believe, with him, that in every instance where it can possibly be done, water rotting should be preferred. The bleaching process relates particularly to flax—for hemp, plain water, of which we all know there is enough in the country, without the aid of alkaline salts, to answer all the purposes of solvents, is quite sufficient—Hemp that is immersed' 48 hours in warm weather, in common soft water, and the water changed and the plant suffered to remain forty-eight hours longer in it, and this too changed, will be found to be in a very trifling degree offensive, and entirely freed from the colouring matter, so apt in land rotting to become fixed in the fibre, and so exceedingly difficult afterwards to be removed by bleaching. It is the same with flax. But hemp, for ordinary purposes, wants no bleaching.

No subject, in the whole round of agricultural improvement, has excited more interest, for the last three years, than that of "preparing" and "dressing flax and hemp"—It has been vainly imagined that both might be done with machines without being compelled to resort to the tedious and disgusting process of previously rotting them. But this idea, hastily adopted, because greatly desired, has been timely abandoned by the most enthusiastic and confident.—It is found to be impracticable, and if it could be done, *even in quantity*, which is impossible, the expense and labour of extracting the gum and mucilaginous matter *afterwards*, would be found to quadruple that which is incurred while it remains in the plant. That project must, of consequence be abandoned. And it is known also that land or dew rotting, especially for hemp, is a waste of the article. The preparation of the land, the pulling or cutting of the crop, and the dressing of it, are all the same whether it is land or water rotted; all the expenses attending its culture are equally as great as is the labour, and yet the article when brought into market is, when water rotted, worth full forty dollars a ton more, than that which is land rotted—this is surely worth attending to—Our Orange county land rotted hemp, although of as good a fibre as any in the world, seldom brings in market within forty dollars of the price of first rate Russia hemp, and it arises altogether from its being land rotted; and the cultivators know this fact.

We have the seed, soil and climate.—We have water to rot and a machine to dress them—and if our farmers do not cultivate flax, and hemp, and water rot and produce articles of as good, if not superior quality to the Irish and Russian, they ought not longer to complain of hard times and poor crops. We export flax seed to Ireland for them to sow at 5 and 10 guineas a cask, for the purpose of supplying us with flax and flaxen goods. I am credibly informed that the superior American canvass which is manufactured at Paterson, in New Jersey, is made of Irish flax, *from American seed! !*—And that about $60,000 is annually paid for this article alone, for this one factory—and this immense sum is gained by the Irish people, from their attention to the rotting *alone*, for we can certainly grow the plant as well—and I know that it can be *better* dressed here. But my dear sir, my subject has run away with me. In truth, I had forgotten myself, and must beg you to do with this letter what you think proper. Mr. Goodsell's, I think, may be of great service, and therefore desire to have it inserted at full length; but you may cut me up as you please. I send you a dozen engravings of my flax machine—pray distribute them amongst your friends. If you will publish the engraving, I will send the wood-cut on to you in a few days; but this I will not do until I hear from you, whether it will be convenient and agreeable, or not.

I remain, dear sir,
Your's most respectfully,
SAMUEL SWARTWOUT.

P. S. I have omitted, in the preceding part of my letter, to notice this machine as a most complete *grain thrasher*, as well as flax and hemp dresser. It is, in fact, a better thrasher than we have ever had here, for the reason that one horse and a man, if the grain should be reaped, can with ease thresh 100 bushels of wheat a day, for the sheaves need not pass away from your grasp, but are held to the beaters at K, (see engraving) and instantly thrashed. I have actually thrashed *clean* a sheaf in two seconds! When grain is cradled and uneven, containing scattering heads in the butts of the sheaves, the whole is suffered to pass under the beater, which will take up a little more time, and will require another hand to remove the straw. A fanning mill may be attached to it, and thus fan the grain as it is thrashed. But as this is not very important, the great labour being in separating the grain from the straw, it may, or may not be done by those who fix up one of the thrashers. You will also perceive that the very same machine answers the double purpose of grain thrasher and flax and hemp dresser—a trifling alteration, but no additional expense being necessary to produce the desired change.

Your's, &c.
S. S.

TO MR. SAMUEL SWARTWOUT.

Paris, Oneida County, April 1823.

DEAR SIR,

Having noticed in the American Farmer of the 27th of September last, a letter from his Excellency, Governor Wolcot of Connecticut, addressed to S. W. Pomroy, Esq. requesting "information upon the subject of preparing flax." I have thought that the following facts might throw some light upon the subject, and thereby induce, perhaps, some of our spirited agriculturists to aim at the production of an article of the first quality and value. And, although I am sensible that many serious objections will be made to the method which I have adopted, and which I would most strenuously recommend to others, from all apprehension of its being too troublesome, as well as offensive; yet if what I shall state, be thought worth publishing, you are at liberty to send it to Mr. Skinner.

I have made many experiments the year past, with flax and hemp. I do not allude to the cultivation of the land, but as to the best method of preparing the plant for a more expeditious way of dressing, whilst the article itself, should at the same time, be every way improved. Hitherto, dew or land rotting, for the reasons given in Gov. Wolcot's letter, has been generally practised; but, I am prepared to show, that *water rotting*, in all cases, where it can be done, is most unquestionably to be preferred.—1st. It is more durable for all the purposes to which it is applied, a fact perfectly well known to those who manufacture sack and cordage. 2dly, It is more easily bleached—and 3rdly, It will yield a greater quantity of fibre from a given quantity of the plant. My own experiments with respect to the superior durability of water prepared flax were very satisfactory. I placed on the ground a quantity of flax that had been sufficiently water rotted for dressing, by the side of an equal quantity of *unrotted* flax, and turned them once in 3 days, until the new flax was sufficiently rotted for dressing also, and upon examination, I found that that which had been previously *water rotted*, had lost none of its strength, and that it had not altered in any respect, except in its colour, which was a little brighter than when laid out—both parcels were now suffered to remain upon the ground until the dew rotted became *worthless*, when the water rotted was found to be still strong and good—I repeated these experiments with dressed flax, and with the plant, and found the result the same.—This, in my mind, fully established the very important fact, that *water rotted flax or hemp* is infinitely superior to that which is dew rotted.

I made an attempt next, to ascertain the proportionate loss in weight, in each process of rotting, and found them both nearly equal, viz: about 25 per cent; but I found at the same time, that the produce of this equal quantity of plant, differed materially in weight. When it came to be dressed, the dew or land rotted averaged from 12 to 16 lbs. of fibre only, whilst the water prepared, gave from 16 to 25 per cent.—This difference in weight I consider to be quite sufficient to defray the extra expense of water rotting, whilst the value of the article would be enhanced one-third more.

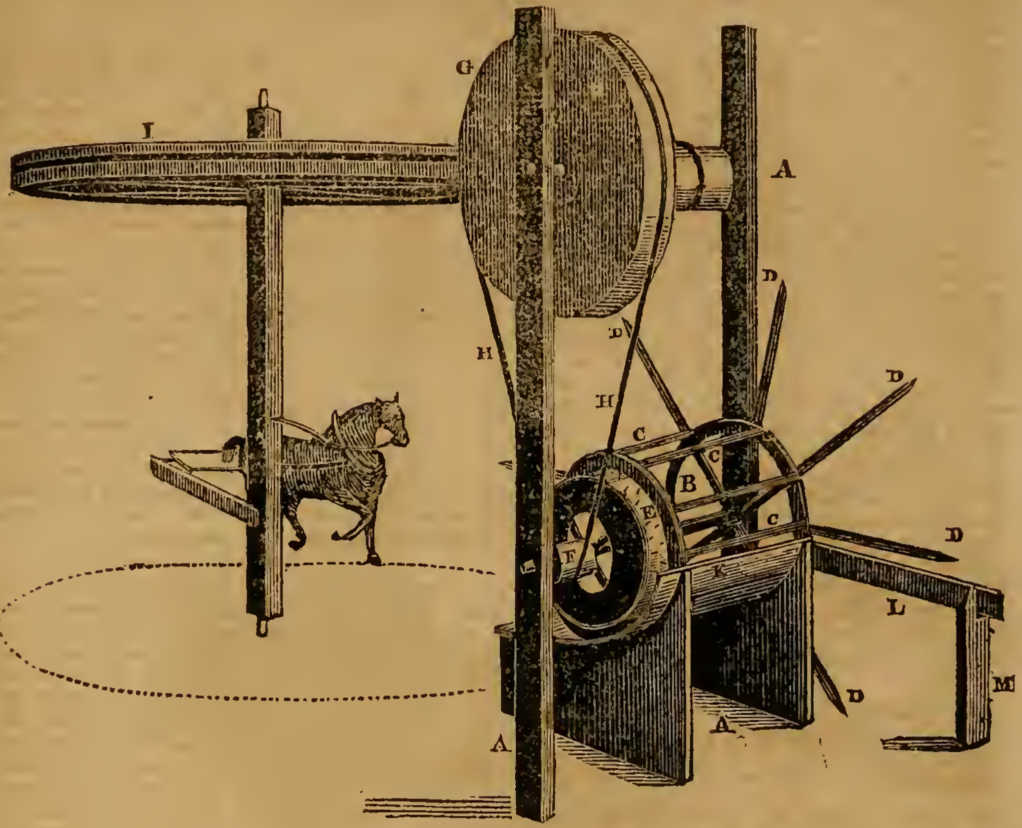
My strong desire to investigate this subject fully, induced me to make other trials, by boiling and steaming, in order to avoid the rotting process altogether: but I did not succeed in any of them sufficiently, to warrant their recommendation to the public—on the contrary I became convinced that neither would answer.

My next investigation, was an attempt to ascertain the nature of the substance, in which the fibre lies embedded; and found it to consist of gum, mucilaginous matter, and a peculiar kind of vegetable extract, containing a small quantity of tan.—These substances were precipitated from their solutions, by means of re-agents; when, after drying, the gum bore a greater resemblance to gum lac, than to any other substance, and was perfectly soluble in solutions of pot-ash, whether caustic or carbonated—and also capable of being dissolved in alcohol.—The other parts, as mucilage and extractive matter, were soluble in water. Hence I conclude that pot-ash is the cheapest solvent for cleansing flax, and that this can be best applied when it has been cleansed from the woody part, and manufactured into cloth.

In the management of hemp and flax, I would recommend the following method, because it saves labour, and is more convenient to dress:—when the plants are pulled, care should be taken to sort them, by putting the longest lengths by themselves; and for the purpose of facilitating the handling of it at the machine, it is well to put about *one* pound of the plant into a bundle as soon as the seed is thrashed, which is done with exceeding expedition by the machine. Let it be put to rot in water. The surface, after the plant is immersed, to be covered with boards or straw, or any thing else to exclude the sun's rays, which will cause the whole to have the same colour.—If troughs or vats are made use of, I would certainly recommend them, where the farmer can possibly procure them—after the plant has been forty-eight hours in water, it should be drawn off, when the water will be found to be exceedingly discoloured, and this should be repeated; after which let the plant remain immersed until it be sufficiently rotted, which must, of course, be determined by experience and judgment. The disagreeable smell, so much dreaded and deprecated, will by this process, be greatly diminished.—When the weather and the water were both warm in summer, I have known them rot in seven days—in other instances, in cold weather, I have known them to lie buried for ninety days, without injury.

I am, Sir, with the greatest respect,
your ob'dt servant,
(Signed) NAMAN GOODSELL.

GOODSELL'S PATENT HEMP AND FLAX DRESSER, AND GRAIN THRASHER.



REFERENCES.

A A A, the Frame—B, the Cylinder—C C C &c. 8 Beaters of wood, 2 inches by 1¾, made of maple or other hard wood, and rounded on the inside. D D D D, &c. 8 Scutchers or Slats of wood, 2¾ inches wide, and ¾ thick, 2 feet long, the outer points cut conically. E, the Hackle—F, Small Whirl, 8 inches diameter, fixed to the axis of the Cylinder—G, Vertical Drum, 6 feet diameter, on the axis of which is a Whirl, 18 inches diameter—H H, Leather Strap or Band 5 inches wide, which runs over the drum G and the small Whirl F—I, Horizontal Drum, 12 feet diameter, around which, and the large Whirl on the axis of G, passes a band or strap, which turns the Drum G, and puts the whole machine in motion. K, Husk or Rest, over which the Hemp, Flax or Grain, is held, when broken and beaten by the Cylinder. L, Scutching Board over which the Flax is held after being broken by the Cylinder, and when it is to be whipped out clean of the sheaves by the Scutchers D D D &c. *not used for Grain.*—M, Upright Plank, about three feet high, with a notch in the upper end, sufficiently large to allow the outer end of the Scutching Board L to play 3 inches.

The above proportions are calculated for a horse who walks 3 times round his path of 24 feet diameter in a minute. One horse is quite sufficient to drive it. When water power is made use of, the large wheel and its accompanying figures are dispensed with. The cylinder performs best when driven at the rate of 200 revolutions in a minute.

The above described machine is cylindrical in its form, and made entirely of iron, excepting the beaters and scutchers. Weighs about 200 lbs.; is 5 feet long and 2½ feet diameter; may be made in 3 days, and is calculated alike to break and dress both hemp and flax, in a style superior to that dressed by hand, and at the same time to thrash from 60 to 80 bushels of any kind of grain a-day. It is not calculated, however, to dress either hemp or flax in an *unrotted state.* They are both to be well rotted, when 100 lbs. of flax and from 200 to 300 lbs. of hemp can be dressed by one man in a day.

For breaking flax, the frame or husk K, (which describes a segment of a circle under the cylinder) is placed within about ½ of an inch of the cylinder itself. Here the sheaves are forced endwise under the cylinder or breakers, the small end first, and when sufficiently broken, the other end is put under; and when the whole is broken, the operator turns to the scutchers, where the dirt and sheaves are entirely beaten out. For this operation, about one pound of the plant at a time, is found to be the most convenient and manageable quantity.

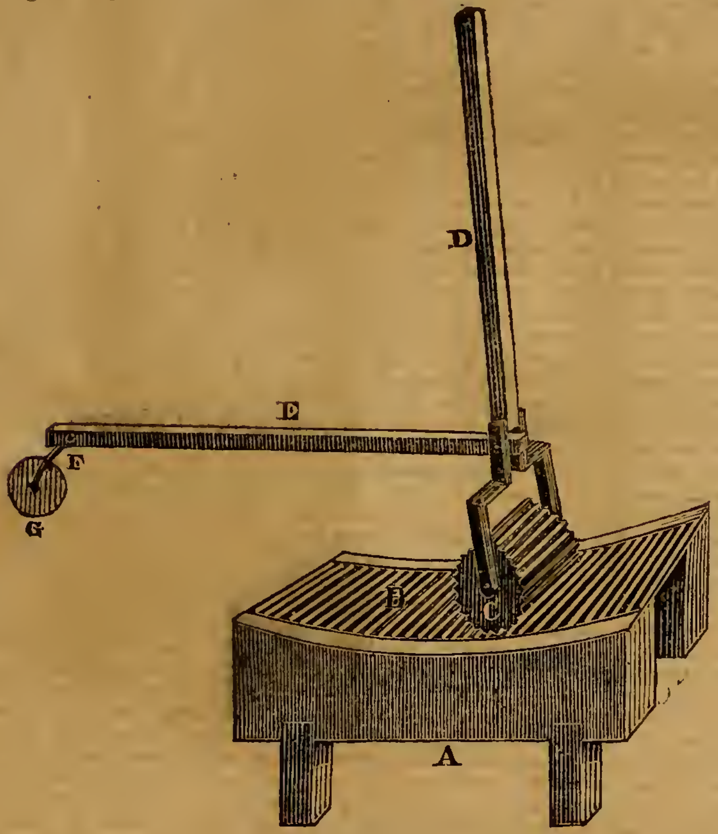
For thrashing grain, the frame or husk K, is to be moved back from the body of the cylinder, full 2 inches; a broad board to be fixed on the resting board, at an inclination of about 20 degrees, to prevent the grain from doubling and falling outside of the beaters. The sheaves (of about half the size of the common bundles) are then to be forced endwise under the breakers and turned, and if any heads of grain remain in the buts, they are to be suffered to pass under the cylinder.

This machine, for simplicity of construction, exceeding durability, ease and perfection of its performance, cannot be surpassed by any other work of art. In addition to the uses already enumerated, at a trifling expenditure for a covering of iron, perforated like a grater, it becomes a clover cleaner, that will clean 8 bushels per day; and by adding a set of steel plated knives, screwed to the beaters, it becomes at once a superior straw-cutter.

The price of a Machine, with the patent right, is 60 dollars.—Counties and Towns sold upon advantageous terms.

Fig. 2.

Brake, for Large Hemp, but not required for the small or ordinary sized Hemp, nor for flax.



REFERENCES.

A, the Frame—B, the Bed—C, Fluted Roller—D, Pendulum—E, Pitman, which is put in motion by means of crank F, attached to axis of the Drum G, at A, in fig. 1.

The Crank F, being attached to the axis of the drum G, sets it in motion. The small end of the hemp is first forced under the roller C and when broken the other end is in like manner broken. The slats in the bed B, are to be made from 2½ inches to three inches asunder, and the flutes of the roller C to correspond.

In reply to an enquiry of Mr. Swartwout at New York, about the price and demand for hemp, the editor is informed that "the price of dew or land rotted hemp, is from 100 to 120 dollars a ton. That of water rotted, is from 175 to 200—One of the most extensive as well as respectable dealers in the article, and a gentleman of as much judgment in it as any in our city, informed me to day, that although American dew or land rotted hemp was a very inferior article, and not worth within 70 dollars a ton as much as the Russia; yet, the American *water rotted* hemp, which is *well dressed*, is worth as much and will bring as great a price as the Russian. He is perfectly enthusiastic upon the subject; has seen our little Cylinder work, and has the promise of a ton at least, of my hemp the next fall; which I will warrant shall be equal, if not superior to the very first rate Russia. All that is necessary, now that we have a machine to dress it with, is to water rot it, and then we shall be as distinguished for Hemp as we are for cotton; for the same attention, and *one-fifth part the trouble*, will place it upon as respectable a footing as any article of commerce or consumption."

New Invention.—We hear with great pleasure that Stephen Van Rensselaer, President of the Board of Agriculture, has purchased Goodsell's Flax and Hemp Machine, which was in exhibition the week past at Greenbush. We are informed it is to be put into immediate practical operation in the vicinity of this city. Gentlemen farmers will therefore have an opportunity to judge for themselves; and we annex the following certificate for the more general information of the public.—*Albany Daily Adv.*

Goodsell's Flax and Hemp Machine.—We the undersigned, have attentively examined the operation of Goodsell's Flax and Hemp Machine at Greenbush, opposite to the city of Albany, and are of opinion, from the simplicity and solidity of its construction, and from its cheapness, and the rapidity with which one man can perform three separate processes in cleaning flax perfectly, in less than a minute, on so small a machine, not exceeding 200lbs. weight, that it will be of great public utility, and will tend to promote the extended culture of flax and hemp, in a manner to become leading staples in the northern and western states. We do therefore recommend to all farmers to cultivate largely both flax and hemp the present year, in a full belief that they may safely repose confidence in the facilities they will derive by the introduction of said machine into general use.

St. Van Rensselaer,
Elkanah Watson,
Erastus Root,
E. C. Genet,
Thomas H. Hamilton,
Daniel James,
Henry Wager,
Philip Hooker,
Alex. O. Spencer,
Aaron Clark,
Asa Adgate,
John James.

Albany, April, 1823.

We the subscribers fully concur in the foregoing certificate, and beg leave to subjoin our testimony to its valuable properties as a *grain thrasher*, having seen it in operation at Mr. Samuel Swartwout's place, opposite the city of New York, May 3, 1823.

Signed,

Herman Le Roy,
Jos. G. Swift,
Thomas Morris,
Thomas Freeborn,
Franciscus C. Tucker,
W. P. Van Ness.

S. Swartwout, Esq. Hoboken, near the city of New York, is the patentee of the machine.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

Poplar Grove, St. Paul's,
S. Carolina, May, 20th, 1823.

SIR,

A correspondent in one of your late numbers, asks for information through the medium of your paper, relative to the reclamation of marsh land, which is covered with a heavy growth of trees—such as ash, maple and gum. He says, that an impression exists in his neighbourhood, where large bodies of that land are to be met with, that woodland marsh, when reclaimed, will sink more than that which is free from wood. If any conclusive experiment has been made of this kind of marsh, I should be pleased to know the result; when convenient, if you will make the necessary enquiries, to obtain information on the subject, I shall be obliged to you. As I have derived much instruction, and received a great deal of pleasure from the perusal of your interesting paper, I will lay before you the result of an experiment, which I think will be conclusive to the mind of your correspondent, that I have made upon two hundred acres of marsh land, which was once as heavily wooded with cypress trees, as perhaps any swamp in Carolina; and of which I gave you some little account in vol 2, No. 44.

My plantation is so situated, that at the lower extremity, where I formerly embanked about two hundred acres, the tide water is generally brackish, and often times salt. It is so embodied with the old rice fields, that in order to supply it with the quantity of water necessary for the cultivation of rice, I dug a canal of twenty feet wide, and four miles long, entering the creek where the tide ceases to flow, and where from the drainings of a swamp many miles in extent, it is generally fresh; from whence at the flood tide my rice fields are supplied, and assisted in a drought by a long reservoir of water. The beautiful level appearance, all alluvial soils, exhibit to the eye, connected with its natural richness, induced me, about the years 1793 and 1794, to commence the undertaking, and which I have never had reason to repent. After many laborious and ineffectual attempts to get rid of the rushes, and turn up the land with ploughs and hoes, I became almost disheartened, being at a loss in what manner to proceed to effect pulverization, without which, the scheme must prove abortive. It occurred to me, that notwithstanding my ditches were dug three feet deep, there yet remained too much sobbiness in the land, to allow the successful operation of the plough. Satisfied of that fact, I dug up my river trunks, and replaced them at six inches above low water mark, sunk the ditches to the depth of five feet, and struck quarter acre drains about three feet deep. The effect was visible in the course of a few months; the rushes being deprived of that nourishment, they had been accustomed to receive from the sobby state of the land, died away. A fire was then applied on a windy day, which consumed them. The plough and hoes were again resumed, and I had the satisfaction of seeing the work progress. The land having now assumed a light husky appearance, very much resembling the peat morasses in Scotland, was thrown into large potato, or corn beds. In a short time a fire was again applied, which burnt them smooth to the ground, leaving ashes of a red colour. It was repeated during the course of the winter, and in the spring, partial crops of corn, oats, barley and rye were planted upon a small scale—all of which failed. Perseverance, however, in tillage, and attention to the depth of my ditches, at length overcame all these discouraging results, the land, in due time, produced rice, cotton, corn, barley, rye and oats, all of which I have had since, growing as a part of my crop, particularly barley, which was harvested about the 15th May; and the land immediately planted in rice, making it produce two crops in one season.

The land, by constant cultivation, has sunk so much, that it is almost incredible to suppose the probability of a plough, drawn by oxen could have gone over many parts of it. Large cypress stumps and roots have since risen up, and now shew themselves 18 or 20 inches above the surface of the land, with the visible marks of the axe. The main bodies of the trees have been removed, many of them six feet in diameter; here and there a large limb is found, which has been squared by my carpenters, and carried home, for the purposes of building—and here, Mr. Editor, arises a question for those who are fond of diving into these matters, who were the persons that applied the axe, and to what market were the trees carried? From the above statement, I think your correspondent will view it in the light of a conclusive experiment, that heavy wooded marsh land sinks more than any other kind of land without wood.

Before I conclude, I will adduce one more instance, still more conclusive, of the excessive sinking of this kind of land. In digging the canal, above mentioned, a piece of the land in question, consisting of about 20 acres, was enclosed by the embankment, wooded with the identical kind mentioned by your correspondent —ash, maple, gum, besides a few very large loblolly pine trees, a quantity of palmetto and cedar bushes, and the greatest part covered with rushes. This land, through which a creek runs, was so completely raised, that nothing but a very high spring tide, aided by an easterly wind, could at all affect, (the tide with me rises six feet)—knowing it to be of the very first quality, I ordered it to be cleaned. Since which, it has produced abundantly of every kind of grain, planted on our low country. It now ranks among my first rate fields, and often produces fifty and sixty bushels of rough rice to the acre.

I remain,
Very respectfully,
CHA'S E. ROWAND.

ON THE MANAGEMENT OF HORSES AND DOGS—BY AN EXPERIENCED SPORTSMAN.

(Continued from page 69, vol. 5.)

Of the Queen's Dog Physician.

There was a fellow in this town (I forget his name) who was called the Queen's Dog Physician. From his attending her majesty's dogs, he went to all the women of fashion, to doctor their dogs also. He never would undertake them, unless he was permitted to take them home with him for ten days. There was seldom any thing more the matter with them than a gross habit of body; fat to a degree, from the scandalous method they are fed, giving them every day, more good meat than would supply two poor children When he got Chloe home, he physicked her, and gave her nothing but dry bread for some time. She would not eat the first three or four days, of such insipid food, and, the first day, howled most bitterly; however he soon cured her of that, by giving her four or five sound floggings, to prevent her annoying his neighbours. I think it scandalous to give dogs what a human being would be grateful to receive: however this must be passed over in oblivion, provided a gentleman be making love to the lady, for then it is necessary to make a considerable deal of love to the lap-dog also. In about ten days the Queen's dog physician brings my lady her dog home, as fine as a star, sleek in his coat, and in tolerable good condition, for he has fed it tolerably well for the last four or five days. Her ladyship is charmed with the looks of her dog; he is as merry as a grig; jumps, frisks, and plays about; when, before, he could hardly walk down stairs to dinner. She pays him very handsomely; he goes away contented, laughing in his sleeve at her ladyship.

Concerning Mad Dogs.

I have mentioned all the fatal and bad maladies to which a dog is subjected, excepting madness. Fortunately, no dog of mine ever went mad, or was bitten by a mad dog; therefore, on that subject, I can give no just opinion: but, provided I had a dog, ever so valuable, bitten very deep, particularly if near to the head, I would destroy him. If he were bitten but slightly, I would cut the bitten part out, and burn the wound well with a hot iron; then pour some *liquid caustic* on the wound, and rub in, two or three times every day, some very strong mercurial ointment; and, *for certain* I would give him *twelve grains of Turbith mineral.* Osmer asserts positively that he has given it to many dogs, badly bitten, and never knew it fail: and several others assert the same. I would rub strong mercurial ointment into the wound every day, for at least one month; and give him, every week, for a month, two doses of the Turbith mineral. Provided a dog went mad in my kennel, I would discharge the person who looks after them; for no dog goes mad without first rejecting his food. The moment a dog refuses his food, or feeds very sparingly, he should be taken from the others, and chained up in some safe place.*

Of Dog's Feet: how to treat them.

I shall now proceed, and speak concerning dogs' feet,—the most essential point about the animal; for, without a good, firm foot, he can never hunt long. I never look at a dog which has a thin, flat, wide, and spread foot; they are not worth two-pence.

It has been a constant custom with me to wash my pointer's feet with strong salt and water after the day's sport. I have found my error, and am convinced that it is a wrong practice. I never altered my method until three years ago. A gamekeeper in Suffolk seeing that a boy was washing my dogs' feet with strong salt and water, (his name was Cooper,) said to me: "Sir, I think you do wrong to wash your dogs' feet in salt and water, at this early part of the shooting season, (it was the first week in September), at this time, sir, when the ground is uncommonly dry, and as hard as a rock. If you will feel their feet, you will find there is a considerable degree of feverish heat in the dogs' feet from having hunted all day on hard and dry ground. A dog, sir, in such weather, should have his feet suppled and comforted. As long as the ground is dry and hard, I always wash my dogs' feet with warm soap and water, and clean them well, particularly between the toes' and balls of the feet; this comforts his feet, allays the heat, and promotes the circulation in the feet. In the more advanced period of the season, when the ground is very wet, then salt and water may be proper." I approved much of the reasons he gave; it shewed the sense of his practice, and the folly of mine: since that period I have taken his advice.

Friar's Balsam for wounds in Dogs' Feet.

WHEN DOGS' FEET ARE CUT BY FLINT AND BY OTHER ACCIDENTS, FRIAR'S BALSAM I HAVE USED FOR YEARS, AND FIND EXCELLENT. You may generally hunt the dog the next day, with a piece of strong wash-leather, four double, tied round the foot; and when their feet are chafed or galled, or the skin is absolutely worn off, FRIAR'S BALSAM is the only thing I ever have used for many and many years.

Of the Canker in the inside of Dogs' Ears.

Dogs are sometimes afflicted with a disorder, called the canker, in the inside of the ear, and some distance in it also. In this disorder I have never had much practice, for I do not recollect that I ever had above four or five dogs so disordered. I have found the following method beneficial. Lay the dog down on his side, with that ear, in which the disorder lies, uppermost: put a lump of soft soap, as big as a walnut, into the ear; pour one table-spoonful of brandy on it; hold the ear close, and rub it well, until the soap comes to a lather; then pour another table-spoonful, and so continue to do, until you have used three or four table spoons-full, constantly rubbing the ear till the soap and brandy be well mixed. Use this method three or four days following. This disorder is known by the dog shaking his head perpetually, and by his smacking his ears against his head and neck; a nasty, stinking humour is also discharged from the ear.

The Canker on the outside of the Ear, with the Cure.

There is another sort of canker, which generally lies at the tip, or bottom side of the ear. This is very visible to the eye, and dogs are very subject to it. I will state to you a method of treating this disorder, invented and practised by that celebrated physician Doctor James, the inventor of the fever powders, who paid much attention to the disorders of dogs. I am certain I have used it to fifty dogs, and *never knew it fail.*

TAKE EQUAL PARTS OF RED PRECIPITATE AND HOG'S-LARD, WELL MIXED TOGETHER. Brush *both sides of the dog's ear* where the disorder lies, with a soft tooth-brush, having some of this ointment laid on it. *Be sure never to Brush against the hair,* but always the way the hair lies. About four dressings, once every day, is generally sufficient.

Provided you do not choose to rub your dog in with the quick-silver ointment, and dab him with the quick-silver dissolved in oil of turpentine, when he has got the mange; (in the former pages of this book, I have told you how to make them;) the following is the best thing I know, after the mercurial ointment; and, before

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* Any man who would keep a dog *one day*, after he was bitten by a dog *known to be mad*, ought himself, to be put in a strait jacket, and sent to the Lunatic's Hospital.—*Edit. Am. Far.*

I was acquainted with that, I always used it, and found it answer well; but then it must be used at least three times, which causes much trouble. It is made after the following method. Take HALF A PINT OF TRAIN-OIL, HALF A PINT OF OIL OF TURPENTINE, HALF A POUND OF SULPHUR VIVUM, (the black coloured sulphur, and not the flower of brimstone,) and ONE OUNCE OF ROACH ALUM, VERY FINELY POWDERED; MIX THEM ALL WELL TOGETHER. It certainly is not prudent to use a strong mercurial ointment and wash, in very cold weather, nor unless your dog lies warm and dry. I know not what might be the consequence of such imprudence; but surely with proper care, the dog can receive no injury.

The most cursed and tormenting malady a dog can have, is to be badly troubled with worms. Give him the best of food it does him but little good: he always looks unkindly in his coat, and will not carry flesh. I have generally been very successful in destroying the worms in dogs, BY THE USE OF CALOMEL; nor have I used any thing else for years: THE QUANTITY I GIVE IS TEN GRAINS; FOUR DOSES, STOPPING ONE DAY BETWEEN EACH DOSE. This year, 1813, I had a dog so troubled with them for about ten months, so very bad, that I could not destroy them. I tried many things: first, *four doses of calomel*, ten grains in each dose; then I gave him *savin*; then bear's-foot; after that, *powdered glass*, four doses, as much in each dose as would lie on a shilling, heaped up. Then a medical gentleman of my acquaintance told me that I did not give him enough calomel; but that first I should boil a pint of milk, cool it, and sweeten it well with brown sugar; give this first to the dog, that the worms might feed well on it, and in about twenty minutes afterwards, give him *twenty* grains (*one scruple*) of calomel. This I gave him three times; it brought a number of worms from him: but, in about 5 or 6 days, he had nearly as many as before; then I knew not what step to take with him. One day, by chance, I met with a very old acquaintance of mine, a tradesman, and happened to mention to him how terribly the dog was troubled with worms. He said: " It is very singular, sir, having known me for so many years, that you should not be aware that I have cured some hundreds of the human race, and my medicine is equally efficacious to the brute creation. This medicine is nothing but THE LEAVES OF THE WALNUT TREE. In summer, when the leaves are green, they must be dried and baked in a plate before the fire, then rubbed to a fine powder with the hands. In winter, when dry, you must buy them at the medical herb-shop. I gave my dog TWO LARGISH TEA SPOONS-FUL, HEAPED UP; first boiling half a pint of milk, letting it cool, and putting the powdered leaves into it: the dog will take it well; but he will not take it in grease, for the leaves have a very strong taste and smell. By the by, I caution all sportsmen never to give dogs milk, which has not been boiled, for it will purge them as much as a dose of physic. I gave my dog, eight days following, one dose; after which, for *above two* months, he *never voided one single worm*.

There is a peculiar excellence in these leaves; they never, in the least, purged my dog: his body was in the same state, as if I never had given him any thing. This is a vast benefit; for, as is does dot purge the dog, it may be given him even when he hunts. I am told by medical men, who have studied botany, that walnut leaves are a positive poison to worms, but by no means detrimental to man or beast.

You may observe, in the autumn, when the caterpillars and grubs eat the leaves of trees, and destroy the garden-stuff, you will never see the leaves of walnut-trees eaten by them: no caterpillar nor grub will approach a walnut-tree. Besides, I give you another proof of their abhorrence of walnut leaves: in summer, when the ground is so dry that you cannot dig for worms to go fishing with, fill a pail, about one-third full, of walnut-tree leaves, and pour a large kettle of boiling water on them; cover the pail over with a thick cloth, and let them stand till cold; then go to a bowling-green, where you observe many worm-casts; spread the water over the grass, and the worms will immediately come up above the ground.—*This I have tried.*

Miscellaneous.

FROM THE ARCHIVES OF USEFUL KNOWLEDGE.

ON DISTILLING APPLE AND PEACH BRANDY.

Cooper's Point, 22d *Oct.* 1810.

The great plenty of fruit the present year, and the bad quality of the spirit distilled from it, in the common way, induce me to communicate some observations on that subject.

The first evil is, running it too long in the first stilling, which, beside injuring the spirit, will not pay for the time lost, and wood consumed thereby. The second, and most injurious is, in rectifying, or second 'stilling; the running it too long, or till the spirit has an ill or disagreeable flavour, which greatly injures the whole that it is mixed with. The third is, want of care to put the liquor into clean casks: the contents of one musty or offensive one, will spoil the spirit of ten times its quantity, if mixed with it. From the experience of more than sixty years' practice in distillation, I find it best to shift the receiver as soon as the spirit runs as low as first proof, and to keep the remainder to 'still with the low wines, or till there is a sufficient quantity to fill the still, with the addition of about one-third water, which will imbibe much of the ill flavour, and leave the spirit more pure. But to make apple brandy to put into wine, or for other particular purposes, I would recommend filling the still half or two-thirds full of good spirit; then to fill it to a proper degree with water, run it so long as the flavour is good, and treat the remainder as before. This operation I call washing; and apple brandy, thus prepared, is preferable, for putting into wine or cider, to any other spirit whatever; and, for common use, I have been in the practice of reducing high proof spirit with the last running from a cheese of good cider or water cider, put in previously to the fermentation of the cider. That process will greatly improve the quality of the spirit, especially for mixing with water, and make it more mild to the taste in one week, than a year's age will when managed in the common way. A further improvement may be made in apple brandy, by putting in the still, when rectifying, two, three, or more pounds of sassafras root in what will make a barrel of proof spirit: a sufficient quantity of sassafras will give it the flavour of peach brandy, and in my opinion, if reduced as above, will make it full as good.

Although many persons are opposed to the distillation of cider, from religious principles, it appears to me that spirit is really necessary in many cases; and apple brandy, managed as above, and kept to a proper age, is as agreeable and more wholesome than what is generally procured, at great expense and risque, from other countries. Early-made cider, and that from rotten apples is unfit for other purposes.

JOSEPH COOPER.

MAJOR ADLUM'S WINE.

The editor of the National Intelligencer says: Having lately the pleasure of visiting his vineyard, we were agreeably surprised, as well at the extent and flourishing appearance of the vineyard, as at the goodness of his wines, especially considering their age. We have little doubt, that, with the advantages of a proper age to his wines before they are used, and the light of the experience which he has already had, Major A. will be able to furnish wines which will bear a fair comparison with some of the most delicate and approved wines of Europe. The successful introduction of this culture will be of great importance to this country, whether we regard the product as an article of merchandise or as a partial substitute for the corroding distilled liquors, now so generally used among us.

Old Wines.—The passion for old wine has been sometimes carried to a very ridiculous excess; for the " thick crust," the " bee's wing," and the several other criterions of the epicure, are but so many proofs of the decomposition and departure of some of the best qualities of the wine. Had the man that first filled the celebrated Heidelburg tun been placed as a centinel, to see that no other wine was put into it, he would have found it much better at 25 or 30 years old, than at 100 or 150, had he lived so long and been permitted now and then to taste it.

At Bremen there is a wine cellar, called the Store, where five hogsheads of Rhenish wine have been preserved since the year 1625. These five hogsheads cost 1200 francs. Had this sum been put out to compound interest, each hogshead would now be worth above a thousand millions of money; a bottle of this precious wine would cost 21,799,480 francs; and a single wine glass 2,723,808 francs.

THE REVENUE.

Abstract of the Net Produce of the Revenue of Great Britain in the Years and Quarters ended the 5th of April, 1822, and the 5th of April, 1823, shewing the increase or decrease on each head thereof.

	Years ended April 5.		Increase	Decr.
	1822.	1823.		
	£.	£.	£.	£.
Customs	9,335,711	9,406,642	70,931	—
Excise	26,695,623	25,546,922	—	1,148,701
Stamps	6,227,318	6,200,060	—	27,258
Post Office	1,288,000	1,369,000	81,000	—
Taxes	7,518,708	6,874,855	—	643,858
Miscellan.	320,483	426,578	106,095	—
	51,385,843	49,824,057	258,026	1,819,812
	Deduct Increase			258,026
	Decrease on the year			1,561,786

	Qrs. ended April 5		Increase	Decr.
	1822.	1823.		
	£.	£.	£.	£.
Customs	2,099,878	2,109,408	9,529	—
Excise	5,856,798	5,656,279	—	200,519
Stamps	1,582,346	1,573,854	—	8,492
Post Office	320,000	330,000	10,000	—
Taxes	980,916	861,764	—	119,152
Miscella.	63,621	76,799	13,178	—
	10,903,560	10,608,104	32,707	328,163
	Deduct Increase			32,707
	Decrease on the quarter			295,456

By the above abstract, there appears to be a decrease, in the year, of £1,561,786; and, in the quarter, of £295,456, as compared with the corresponding year and quarter. The decrease, however, has been produced by diminished taxation—namely, the reduction of the Excise Duties on malt, salt and leather, and the repeal of the Agricultural Horse Tax. There is a surplus over the charge on the Consolidated Fund of £2,133,769: in the corresponding quarter of last year it was only £1,545,047.

FROM NILES' WEEKLY REGISTER.

LONGEVITY.

According to the census of Great Britain, the population, in 1822, is as follows:

In England,	Males	4,808,898	9,830,461
"	Females	5,021,563	
Wales,	Males,	342,154	880,210
"	Females	538,056	
Scotland,	Males	923,546	1,956,706
"	Females	1,033,166	
		Total,	12,667,377

In this population, there were 100 males and 191 females about the age of 100.

The population of Great Britain in the year 1720, according to Colquhoun, was 6,955,000—as there are now living therein 291 persons upwards of 100 years old, we then find it out, by the rule of three, that an *original stock* of *twenty-four thousand* individuals, is necessary in Great Britain to furnish *one* centenarian.

I do not know of any statement shewing the probable amount of the population of those then uninhabited regions, which now compose the United States, 100 years ago, more entitled to respect than that produced by my own calculations, and published in this work, vol. XIII. p. 179—on which occasion every thing like authority within my reach was resorted to. I supposed that the whole population, exclusive of Indians, may have amounted to 490,000, in the year 1725—if so, and in the year 1825, we shall have *twenty* individuals, only, of the age of 100 and upwards, it would appear that our climate and country are as favorable to long life as Great Britain. But some allowance must be made for the emigration of persons, of mature age or advanced in years, since 1725; and it is reasonable to believe that about *thirty centenarians* in *all* the United States in 1825, will fully establish the fact, that such aged persons are as common in our country as in the other. The allowance for emigration is regarded as liberal—for, according to the best estimate that I can make, (see volume and page referred to above,) the amount of all such, of all sorts and *all* ages, has not exceeded 327,000 persons *from* the year 1725 up *to* 1819—the addition, then, of a *third* as acting on the *whole stock* of 1725 for the production of *centenarians*, is large enough. But those who are curious in such things will estimate for themselves—and such estimates must considerably depend on opinion at last.

In vol. IX. page 97, there is a very valuable essay "on the probability of human life in the middle states, particularly at Wilmington, in the state of Delaware, and its vicinity." This was furnished by one of the most acute and correct men of the age; a plain man that never knew his own worth, or put forth the strength of his own mind. I recommend it to the consideration of all who feel an interest in its subject. The following is the substance of a small part of that essay—in the year 1794, the borough of Wilmington, with about 3,000 inhabitants in all, contained 152 persons aged more than 60 years; some of these moved away, and it was uncertain whether they were living or dead; but it was ascertained that 112 of the 152 had died previous to the year 1814, of whom 46 attained the 80th year, 26 the 85th, twelve the 90th, 2 the 92d, 1 the 94th, 1 the 95th, 2 the 96th, 1 the 102, 1 the 103. Now, though we cannot count the *stock* which gave these results, we see that a *gross population*, say of 4,000 souls, at or about the year 1814, furnished two centenarians—or one to two thousand *living* persons. At this rate, Great Britain ought *now* to have 6,338, of 1000 and upwards, instead of 291.

Again.—The Rev. Dr. Perkins lately delivered his *half-century* sermon, at Hartford. Con. He was a minute observer and careful recorder of such things as are now before us—he stated that, "during the fifty years of his ministry, sixty persons had died in his parish who were over 70 years of age, thirty over 80 years, 8 over 90 years, and 2 over 100 years each. He had preached 3,550 sermons of his own writing." We cannot tell the average number of persons in his "parish," by which we understand those under his own pastoral charge: for a "parish," in the United States, simply means a congregation of Christians, of any sort whatever, worshipping at one place—so any town, if it has five or ten ministers and as many places of worship, may have as many parishes. It would seem, then, a large allowance, to suppose that the congregation of the venerable doctor averaged 1500 persons for the 50 years, which would give one centenarian for, at *the most* 1500 *existing* persons.*

But Hartford, as well as Wilmington, are remarkably healthy places, and the people are of very temperate and sober habits—so that *they* cannot furnish us with general data; nor do the cities and large towns—for *they* are, in *all* countries, regarded as unfriendly to long life. The bills of mortality of these, however, shew a much larger proportion of centenarians than Great Britain exhibits—in which latter the amount of these is as *one* to about *forty-two thousand five hundred* of existing population.

In Baltimore, with 60,000 inhabitants, during the year 1821, five died over the age of 100—or, as 1 to 12,000. In Boston, in 1820, population 43,893, four died that were aged more than 100 years—or, as 1 to 11,000. In New York, the same year, population 124,000,† only 2 of 100 years and upwards—as 1 to 62,000; but there were 46 persons who died between the ages of 90 and 100. In Philadelphia, population 110,000, in the same year, there were 5 above 100 years old, or 1 to 22,000—and 18 between 90 and 100. The average of the four CITIES, of Boston, New York, Philadelphia, and Baltimore, together containing about 338,000, and having 16 centenarians, is as 1 to 21,000 inhabitants—twice the proportion that exists in Great Britain. We have no particular returns of the southern cities, but know that at Charleston, Savannah, &c. the decease of persons of more than 100 years, is frequently noticed in the papers. My apprehension is, that they have a full proportion of such persons compared with their sister cities of the United States.

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* *In* 1810, *there were three churches in Hartford: the city and township then contained, in all,* 5,347 *inhabitants. It has increased considerably since, and now has a population of nearly* 7,000—*so that the number suggested is rather large, as the average of Dr. Perkins' "parish" for fifty years.*

† *The whole island of New York is included in this number, as all the persons that die on it come within the range of the bills of mortality—in regard to Philadelphia, this is about the amount of persons of the city and county who are supposed to be within the range of such bills, and is pretty near the real number.*

NATURAL WONDERS.

It is very surprising, that two of the greatest natural curiosities in the world are within the United States, and yet scarcely known to the best informed of our geographers and naturalists. The one is a beautiful fall in Franklin (Habersham) county, Georgia, the other a stupendous Precipice in Pendleton district, South Carolina; they are both faintly mentioned in the late edition of Morse's Geography, but not as they merit. The Tuccoa fall is much higher than the Falls of Niagara. The column of water is propelled beautifully over a perpendicular rock; and, when the stream is full, it passes down without being broken. All the prismatic effect, seen at Niagara, illustrates the spray of Tuccoa.

The Table mountain, in Pendleton district, South Carolina, is an awful precipice of 900 feet. Many persons reside within 5, 7, or 10 miles of this grand spectacle, who have never had the curiosity or taste enough to visit it. It is now, however, occasionally visited by curious travellers, and sometimes men of science. Very few persons who have once cast a glimpse into the almost boundless abyss, can again exercise sufficient fortitude to approach the margin of the chasm. Almost every one, in looking over, involuntarily falls to the ground senseless, and helpless, and would inevitably be precipitated and dashed to atoms, were it not for measures of caution and security that have always been deemed indispensable to a safe indulgence for the curiosity of the visitor or spectator. Every one, on proceeding to the spot whence it is usual to gaze over the wonderful deep, has, in his imagination, a limitation, graduated by a reference to distances with which his eye has been familiar. But, in a moment, eternity, as it were, is represented to his astonished senses, and he is instantly overwhelmed. His system is no longer subject to his volition or reason, and he falls like a mass of mere matter. He then revives, and in a wild delirium, surveys a scene, which, for a while, he is unable to define by description or imitation.

[*Southern paper*.

TO THE EDITOR OF THE AMERICAN FARMER.

SIR,

Having observed in your very valuable paper, at different times, directions for the treatment of several diseases that the human family are subject to, and believing your willingness to contribute to the relief of your suffering fellow creatures—I have taken the liberty of requesting that you will enquire of some of your many able correspondents, and publish in the American Farmer, directions for the *treatment* and *cure* of dyspepsia, a most troublesome and dangerous disease that I have had for four or five years, without having obtained any relief from consulting the medical faculty, and taking much medicine. By giving this a little of your attention, I have no doubt, my dear friend, but that you will be extending relief to many of your afflicted fellow creatures besides myself. And may Heaven reward your exertions to relieve the distressed—and prosperity and happiness attend you through life.

I am your ob't serv't, and
CONSTANT READER.

From Hare's View of the Structure, Functions, and Disorders of the Stomach, &c.

It was well observed by the late Dr. Saunders, that we are made gluttons from the cradle, by the officiousness of our nurses. A child's health is disordered from being over fed. It cries and complains from the effects; and with a view to silence it more food is given; so that the evil is increased instead of remedied, and the capacity of the stomach gradually extended far beyond the bounds of nature. Both the quantity and quality of our food should be proportioned to our habits of bodily exercise.—When we have active exercise in the open air, we may with impunity eat a hearty dinner, taking care, even then, to leave off before the appetite is palled; but on days when persons of weak digestion do not go out of doors, and especially when the mind has not been energetically occupied, it would be well to abstain altogether from solid animal food, and satisfy themselves with simple farinaceous matters, in the composition of which care should be taken that eggs are as sparingly used as possible. Nothing is a grosser blunder than that eggs are eligible for weak digestion and for the diet of the sick. They never assimilate with the contents of a disordered stomach, but partly coagulate, and form various crudities; and partly generate a noxious vapour, which, under its real character of sulphuretted hydrogen, rises from the stomach into the mouth. The colouring material of the yolk of the egg is sulphur, which, combining with the watery contents of the stomach, forms the vapour alluded to. It is the sulphur naturally contained in an egg which tarnishes a silver spoon; it is the sulphuretted hydrogen of an impure atmosphere which tarnishes silver in general. Although anxious to impress the advantages of moderation in eating, and the evils which arise from undue indulgencies, I wish also to impress the disadvantages and imprudence to weak stomachs, of long fasting, conceiving that they should never be more than four hours without the accession of some easy kind of food; and that, even in good health, an interval of seven or eight hours is by far too long.

Editorial Correspondence.

ON THE CULTURE OF VINES, THE POPPY, &c.

Dear Sir,

My son has in a box, vine plants from the seeds of the grapes sent from Europe; and also from the seeds of the common shop raisins. These seeds produce fruit as soon as vine cuttings, put in the ground at the same time.—How easily and how cheaply we may have grapes throughout the United States, by this mode. Perhaps you may think it worth communicating by your useful American Farmer.—I wish you to come and see how I have improved my estate, by the ashes of burnt sod. My great want is poppy seed, for I am convinced that we might become exporters of opium, and of a better quality than that imported.—Opium and Laudanum are much used; and even in Asia, the opium is so much adulterated, that my physician always made his own opium. The doctors here, complain that laudanum is often so weak, that fifty or eighty drops from one apothecary, is not equal to twenty from another—Every State government ought, I think, to establish a dispensary; that medical prescriptions may be certainly serviceable.—Surely the health of our fellow citizens merits attention—this is an important subject, and I hope you will obtain a good essay upon it. Druggists multiply, without controul, and there seems to me a strange blameable disregard of evils resulting from bad medicine.—Pardon this digression, produced by mentioning opium, the cultivation of which I strongly recommended in one of my addresses, from Prince Georges' county.—Many thanks for the millet seed—when you have other seeds to dispose of, "Oh! then remember me."

Your's respectfully,

T. L.

Near Washington, D. C.
May 28, 1823.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 13, 1823.

It does not require an editorial paragraph to attract attention to the communication, relating to the culture, preparation, and dressing of hemp and flax, given in this number. The subject is obviously important, and the information connected with it, derived from Messrs. Goodsell and Swartwout, is clear, explicit and valuable. It was, comparatively speaking, but yesterday, that partial attempts were made, first, we believe, in Calvert and Talbot counties, in Maryland, to cultivate *cotton* for family use. Who could then have anticipated, that it would so soon constitute the great export staple of the southern states? Why may we not believe, that in a few years, if we do not export, at least, we shall not *import* hemp and flax, either in the raw, or the manufactured state? What the cotton gin has done in the former, Goodsell's flax breaker may accomplish in the latter case—but the consideration that renders this invention doubly important to the agriculturist, is the fact, well attested to the Editor, that the machine is admirably well adapted to the purpose of *thrashing grain.* A very distinguished agriculturist of Massachusetts, who has had great opportunities of observation, very recently saw this machine at work; and he says, it so far exceeds all other machines for this purpose, both European and our own, that he would not have any other. As to *Mr. Dey's* flax machine, which promised so fairly, we understand explicitly, that it has been finally abandoned, as being useless. We lament it, as we ought to do all abortive applications of zeal and ingenuity, and yet more, as we fear a considerable sum of money has been lost by misplaced confidence in the success of a principle, which has utterly failed.

TRIALS OF SPEED.

Upon the ground provided by the Society for the improvement of Horses, in the state of New York, several trials of speed have been made, which serve to show that we have now in the United States, some first rate horses; some, that for *continuance of swift running*, may be well compared with the best of which we have any record—From these horses, great improvements may be made by the farmers of New York, and Virginia, who own suitable mares, and are willing to pay the requisite attention to rear valuable animals.

The great Match Race on Long Island, between Eclipse of New York, and Henry of Virginia, was run in the following time:

First heat,	7	minutes	37	seconds
Second do.	7	do.	49	do.
Third do.	8	do.	24	do.

In the first heat of four miles, Henry took the lead and beat Eclipse by about half a length—In the second heat also, Henry took the lead for the first and second miles, when Eclipse passed him, and came out several lengths ahead—In the third, and most decisive trial, Eclipse led between two and three lengths. In the third mile, Henry came up with his rival within about half a length—but in the fourth and last mile, Eclipse maintained his ascendancy and came out a length and an half ahead, thus winning the sum of Forty Thousand Dollars.

The New York Society, we think, have judiciously directed their attention not only to *fleetness* and *continuance*, but to *power*, by requiring their horses to carry higher weights than usually borne on other courses.

On Monday last, commenced the races on the Fairview course, three miles from Baltimore. The first day's contest was between Col. Johnson's mare Betsey Richards, and Mr. Sleeper's mare Lady Lightfoot—the former easily won the first heat, not quite 4 miles, in 7 minutes and 31 seconds—after which, Lady Lightfoot was withdrawn.

On Tuesday the Virginia horse, Flying Childers, owned by Gen. Wynn, beat Gen. Ringgold's horse Partnership, and performed the heat, without whip or spur, in 5 minutes and 42 seconds—three mile heat.

On Wednesday the third and last day's race, (2 mile heats) was run between the Dutchess of Marlborough, Sir Harry, and Flaxen-Mane. The heats were handsomely contested and afforded great satisfaction to the numerous spectators who were assembled on this occasion. At the close of the first, the Dutchess of Marlborough came out about half a length a head of Sir Harry, Flaxen-Mane some lengths behind. At the end of the second heat, the Dutchess was again ahead—Sir Harry two to three lengths behind, and Flaxen-Mane in the rear of all.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7 12 sales—White wheat, $1 40 to 1 45—Red do. $1 36 to $1 40—Rye, 75 cents—Corn, 50 to 52 cents—country Oats, 40 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 32 to 35 cts. per gal.—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $3 per bbl.—No. 2, $2 75—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, 20 to 25 cts per lb.—Eggs, 12½ cts. per doz.—Hay, $17 per ton—Straw, $10.

Tobacco is selling nearly as per last report.

FOR SALE

At a low price and on a long credit, the FARM on Elk Ridge, occupied by Mr. H. Scott, and formerly owned by Luther Martin, Esq. containing about eleven hundred acres.

It is situated about eleven miles from this city, near the Washington road, and is considered remarkably healthy—The situation is handsome, and the land easily improved by plaster and clover. This property will be divided if required, and immediate possession given—For terms apply to

ROBERT & JOHN OLIVER.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promply attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

AN ADDRESS

DELIVERED BEFORE THE MASSACHUSETTS AGRICULTURAL SOCIETY AT THE BRIGHTON CATTLE SHOW, OCT. 9, 1822. BY THE HON. TIMOTHY PICKERING.

Gentlemen of the Massachusetts Society for the promotion of Agriculture,

It appears to be expected, that at each of your anniversary meetings, a discourse on Agriculture should be delivered. The Trustees of the Society have requested me to address you at this time. But though willing to be laid under contribution to the great object of your institution, it has occasioned a degree of solicitude to present something meriting your attention. From the multitude of books written on the subject of Agriculture—embracing in that word whatever should employ the thoughts and labours of the skilful husbandman—the field would appear almost boundless: yet to select topics particularly interesting to the farmers of Massachusetts, and here to discuss them so as to communicate useful and acceptable information, was not unattended with difficulty. My address must necessarily be miscellaneous.

Philosophers and practical husbandmen have for ages employed their thoughts and their pens on the various operations in agriculture; yet diversities of opinion still exist; and the reasons of many of these operations have been little more than conjectural. What constitutes the food of plants, has long been a subject of diligent enquiry. It was natural to suppose that if this food could be discovered, it could be more easily provided, or at least be more efficaciously administered. The palpable differences which distinguish the immense variety of plants, in their forms, textures, colours, and tastes, naturally suggested the idea, that each variety required its specific nourishment. Yet it being a matter of common observation, that the same soil would nourish and bring to maturity multitudes of different plants, of very opposite qualities—some yielding wholesome food, and others a deadly poison—at the same time all growing together, and robbing one another: a nobler and more simple idea presented itself—that the food of all plants was the same; but that each species was endued with the power of converting that food to its own peculiar substance: as among animals, the same grain produced all the varieties of flesh which go to sustain the life of man. In the vegetable kingdom, this supposed power of conversion seemed strikingly apparent in the effects of grafting of fruits. The juice imbibed by the roots from the earth, and immediately changed to the proper sap of the native stock, ascend and spread through all the limbs; and if each of these be grafted with a different fruit, the varieties will be as numerous as the branches.

By the modern discoveries in chemistry, these mysterious effects seem to be accounted for For it appears that all kinds of plants are composed of a small number of elements, whose different arrangements and combinations produce all the varieties in question. Seldom more than seven or eight of these elements belong to plants, and three constitute the greatest part of their organised matter. But each of these is a compound, consisting of the same materials, only in different proportions. The three principal ingredients in the food of plants, and which by them elaborated constitute the food of man and other animals, are named by chemists, carbon, oxygene, and hydrogene; in other words, are charcoal, vital air, and inflammable air; and these exist in the air we breathe, as well as in manures consisting of vegetable and animal matters.

It may seem incredible that the thin air, an invisible matter, should be changed, in the process of vegetation, into solid substances, as wood and stone: but nothing has been more clearly ascertained, than that in 100 parts of pure limestone, 45 parts are fixed air, or carbonic acid; which in the act of burning the stone into lime, is expelled: for if at that time the stone be weighed, it will be found to have lost so much of its original weight. It is also well known that this same lime, which slaked with water, or exposed to the air, falls down into a powder, will immediately afterwards begin to imbibe fixed air from the atmosphere, and eventually, though slowly, recover its original weight. It is this same carbonic acid, or fixed air, which at the bottom of wells, every year proves fatal to a number of lives. For this air, when separate, being heavier than the air of the atmosphere, sinks and remains at the bottom of wells, and is a deadly poison. It is the oxygene in the atmosphere, called also vital air, because essential to animal life, which mingled with the fixed air, renders the latter harmless.

I have introduced these few remarks on the food of plants, to present an idea—a very faint one indeed—of that very interesting subject; which, as already observed, has so long employed the thoughts of philosophers and agricultural writers; but the satisfactory discovery of which seems to have been reserved for the present age. This view seems to account for the vast variety of plants which will grow on the same spot of earth; the ingredients of their food being substantially the same, but varied in the proportions peculiar to each ; and which each has the faculty of appropriating to its own use; rejecting the rest, or casting it off as excrementitious.

But although the same articles of food will afford nourishment to a variety of plants, yet these are so formed as to require a variety of soils, adapted to their several constitutions; some preferring a stiff, others a loose or light soil—some a moist and others a dry one. Few, however, will refuse a well compounded loam. Soils (like plants) however diversified in appearance, consist of different proportions of the same elements. Four earths generally abound in soils; and these, by chemists, are called aluminous, silicious, calcareous, and magnesian; and of these, the three first are the principal; and, in familiar language, well known to every farmer, as clay, sand, and lime. Magnesia is often found in limestones; and the combination is said to give the strongest lime for the farmer's use; so as in smaller quantities to serve his purpose, as well as mild lime applied in much larger quantities.

The first object which claims the farmer's attention, is the nature or constitution of the soil. The next embraces the means of enriching it and preserving its fertility. That intimate mixture of clay and sand which is called loam, is the most desirable soil, as being already prepared for every operation in agriculture. A stiff clay demands opening by the addition of sand and other materials; and a sandy soil requires the addition of clay. But calcareous earth is considered as essential to give to soils the capacity of attaining the highest degree of fertility. Few soils, indeed, are wholly destitute of calcareous matter, though it may be invisible to the eye: but very few possess so large a portion of it as would be salutary. There can be little danger, therefore, of applying it to excess in Massachusetts, where so little in any form has been found. Limestone is the great source of calcareous matter. But this is of various qualities. Very little of it is purely calcareous. Some lime stones in Great Britain have been found to contain eleven parts in twelve of sand. Of such lime, if sixty bushels were spread over an acre of ground, five bushels only of calcareous matter would be applied. To know then the constitution of the lime he uses, is important to the farmer; and not less so to the mason in preparing his mortar, which will require the addition of more or less sand, according to the composition of the lime. All marles contain calcareous matter, and are of greater or less value, according to the proportion which this bears to the clay, sand, or other substances mingled with it. All shell fish will supply this material. In some parts of the United States, remote from limestone, oyster shells are burnt to obtain lime for building; and in all seaport towns where many oysters are used for food their shells will be found in quantities deserving the neighbouring farmer's attention; and if raised in piles, mingled with wood, may be burnt to lime. Of the vast improvements of the lands in Scotland, within the last forty or fifty years, lime has been the basis: and the use of it the first step towards rendering the application of manures, strictly so called, highly productive. There they will lay from fifty to two hundred or more bushels on an acre. In Pennsylvania, where lime has been long and extensively used twenty to fifty bushels to the acre has been found sufficient, and safer than any larger quantity, at least in the first application. A remarkable instance of the beneficial use of lime, though only at the rate of about twenty bushels to the acre, well merits a recital. The experiment was made on a field of ten acres, for which the farmer had provided two hundred bushels; but it being his first essay in using lime, it so happened that the whole quantity was disposed of when he had gone over nine acres. Indian corn was planted; and the crop was very great. The next year, the field was fallowed, and at seed time sown, a part with wheat and a part with rye; and good crops were produced. "In the Spring (says the farmer) I sowed it with clover and timothy (Herdsgrass) and put two bushels of plaster on an acre; and had as great a crop of clover as could grow; it lay three weeks before the time of mowing." He adds—"The lime and plaster did all this: for no land could be poorer before. Where I laid no lime I got no clover, although I put on the plaster."* The kind of soil in which lime operated so powerfully, is not mentioned: but probably it was clayey; a very common soil in the country where this land lay. Another like instance occurred in the Delaware state, on a clay farm, on which plaster produced no effect until the land was limed.† While lime operates very beneficially on strong clays, it is said to be still more useful on lighter soils. To ascertain its effects on any lands, will require but little time and a small expense. A single cask of lime will be sufficient for a number of comparative experiments. If a few adjoining rods of land be set apart for the purpose, and the lime, by slacking, brought to a fine powder, it may be evenly spread on the several small strips, in different proportions, at the rate of twenty and any greater number of bushels to the acre. Then, by raking, or harrowing, mix the lime with the surface soil, and plant each strip equally and uniformly with Indian corn. One equal strip, tilled and planted exactly as the others, but left unlimed, will enable the experimenter to see what advantage may arise from liming. In the next year the effects of lime in its respective proportions, may be further tested, by sowing the same strips with equal quantities of one sort of grain and of grass seeds.

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* *Memoirs of the Philadelphia Society of Agriculture, Vol.* I, *page* 193.

† *Ibid. Vol.* II, *page* 187.

In like manner, small experiments may be made to try the effects of clay on light sandy or gravelly loams, and of sand on stiff clays. The clay should be carried on and spread, and lie on the surface during the winter, to break and moulder by the alternate frosts and thaws, that it may be more effectually mixed with the soil.

As to the manner of applying lime, I am satisfied the best is that recommended and practised where lime has been most extensively used; that is, to slake it with water, and as soon as it falls to a fine powder and is cool, to spread it evenly over the land, and with the harrow mix it with the soil: its greatest utility depending on its intimate incorporation. In liming extensively, the lime is often, perhaps most commonly, carried on and dropped in small heaps to be slaked by the moisture of the air: but it should be carefully attended to, that it may be spread as soon as it is slaked; or there will otherwise be danger of its settling in lumps, which may never again be duly pulverised.

If the application of lime be, as is represented, so important to the great and permanent fertility of the soil (and of this I entertain no doubt,) while the knowledge of the fact is all that is essential for the practical farmer to know; something more is desirable to satisfy inquisitive minds; and if the reason for using lime, or its mode of operating, could be shown, it would give confidence to the husbandman, while it gratified the philosophical enquirer.

A gentleman who is reputed to be one of the greatest chemists of the age (Sir Humphrey Davy) informs us that "when lime, whether freshly burnt or slacked, is mixed with any moist fibrous matter, there is a strong action between the lime and the vegetable matter, and they form a kind of compost together, of which, a part is soluble in water:"—that "by this kind of operation, lime renders matter which was before comparatively inert, nutritive; and as charcoal and oxygene (vital air) abound in all vegetable matters, it (the quick lime) becomes at the same time converted into carbonate of lime,' that is, it is restored, by again combining with carbonic acid or fixed air, to the state in which it existed before it was burnt, except its being reduced to powder. Again he says—"Mild lime, powdered limestone, marles or chalks (for chalk is a limestone) have no action of this kind upon vegetable matter; by their action they prevent the too rapid decomposition of substances already dissolved; but they have no tendency to form soluble matters." He then remarks, that "chalk, marle, or carbonate of lime, will only improve the texture of the soil; or its relation to absorption; acting merely as one of its earthly ingredients. Quick lime when it becomes mild, operates in the same manner as chalk; but in the act of becoming mild, it prepares soluble out of insoluble matter." Again he says—"All soils are improved by mild lime, and sands more than clays.

While quick lime, according to this celebrated chemist, is so usefully applied to land abounding in fibrous matter, to effect its speedy dissolution, he says its application should be avoided, where a soil contains much soluble vegetable manure; as it either tends to decompose the soluble matters by uniting to their carbon and oxygene, so as to become mild lime, or it combines with the soluble matters, and forms compounds having less attraction for water than the pure vegetable substance.

But an ingenious writer, under the signature of Agricola. in Nova-Scotia, says, that notwithstanding all these precautionary fears, the offspring of chemical creation, the British farmer is mostly in a habit of applying quick lime to all sorts of soils. And he assigns an adequate reason, that caustic lime cannot remain any length of time in the ground, without passing into a carbonate and becoming mild. This writer offers different reasons for the beneficial operation of lime; that it is capable of absorbing not only that quantity of carbonic acid which it possessed in its natural state (being 45 parts in 100) but an additional quantity; and can form what chemists call hypercarbonate. This, he says, is highly soluble in water: which accounts for the admission of lime into the structure of plants; and that this excess of carbonic acid adheres very loosely to its base (the mild lime) and is liberated without any extraordinary degree of heat. The carbonic acid, a most important article of vegetable food, is copiously evolved in the putrefactive process of manures; the calcareous earth fixes and prevents its escape—forms with it a hypercarbonate, and readily imparts it, in union with water, towards the nourishment of the crops. It is supposed to do more; it unites with the carbonic acid floating in the air; and when there is a scarcity of aliment in the soil, it seizes and secures this food in the atmosphere, and afterwards disperses it, according to the calls and necessities of vegetation. Hence the necessity of keeping lime on the surface. It is then ready to intercept, and combine, with the carbonic acid which is generated by the fermentation of the putrescent matter lying at lower depths, and to attract the same gas (the carbonic acid) from the surrounding air.

I confess myself much better satisfied with the observations of Agricola, in accounting for the operations of lime, than with the solution offered by Sir Humphrey Davy. If the statement of the former be correct, we can see a reason for the long continuance of the beneficial effects of lime on land; for although it is not itself food for plants, it is constantly employed in collecting and imparting to them that food, from the sources which have been mentioned. Does not the reasoning of Agricola also indicate the cause why lime benefits sands more than clays? The latter are opened and rendered lighter by its application: and to destroy their too great tenacity, seems to be a main advantage gained by liming clay soils; whereas sandy soils are already sufficiently porous.

An old English practice of burning clay for a manure, has lately been revived in England, and with some appearance of novelty. The facts stated in regard to its operation, preclude all doubt of its efficacy. On stiff clays, it has, in the practice of some farmers, superseded the use of lime: because, although much greater quantities of it are required, yet being on the spot, in the very field where it is wanted, it is much cheaper than lime, for which the farmers are often obliged to send upwards of twenty miles—It is said that clay thus burnt,—in which the process is so managed as to reduce the clay to the condition of ashes,—will not again, when wetted with rains, recover its original texture of a close compact substance too tenacious of water, and when dry, too hard for the roots of plants freely to penetrate. I have called the burning of clay for manure an old English practice: for I find an account of it in the second of Dr. Elliot's Essays on Field Husbandry, written and printed in Connecticut, upwards of seventy years ago. The Doctor gives a recipe, copied from an English book, for the process of burning it; which is with a *smothered fire*, a point of indispensable necessity, according to the present practice in England.

Many ways of improving lands, both in the manner of cultivating them, and in the kinds of useful plans to be introduced, have been often recommended; and certainly a spirit of improvement has been extensively excited; yet much remains to be done, to raise our crops to an equality to those in some European countries, whose lands and climates are no better than our own. But have we the means of accomplishing it? I answer, generally, that we have. Our animals for labor are equally efficient. Our instruments of husbandry are as good, or capable of being easily made so. Our husbandmen are as intelligent, and unquestionably less prejudiced, and less averse to adopt improved modes in farming. In England, a bigotted perseverance in ancient practices, however absurd, has in times past been astonishing. Her own writers inform us, for instance, that in one county all their common ploughing has long been performed with one pair of horses driven by the ploughman; while in an adjoining district four or five horses, in a single line have been put to the plough, with the addition of a driver, and yet ploughing no more land, nor with a deeper furrow, than was elsewhere effected with one pair of horses.

But although I suppose no prejudices equally strong exist among us, still we are, I think, too prone to adhere to old usages, where no good reasons can be given for them. New practices in husbandry are often—perhaps chiefly—attempted by persons not bred to that occupation, and these, for want of practical skill may often fail in the execution; and when successful, the success is ascribed to a liberal expenditure of money, beyond the ability of the mere farmer. But what risk will attend experiments made by farmers themselves, to test the value of these novelties? Each one for himself can try them on as small pieces of ground as shall suit his convenience, and at a very small expense of time and money. The introduction of improvements, would be facilitated, if the money expended, and especially the quantity of labor bestowed upon them, were always accurately stated, and their authenticity vouched by the names of the improvers. And if the experimenters, in these cases, who hire all the labor, and this often performed in their absence, are merely *not losers*,—practical farmers, always present, and working too with their own hands, would assuredly render such new practices *profitable*.

But I apprehend the knowledge of modern improvements in husbandry is far less extended than may commonly be supposed. That celebrated Travelling Agriculturist, the late Arthur Young, a man of science and literature as well as a practical farmer,—after visiting different districts in England, for the purpose of observing, and for the information of his countrymen describing their various modes of husbandry, commenced, about the close of the American War, his Annals of Agriculture. He afterwards travelled over France and parts of Spain and Italy with the same views. Thus fraught with agricultural knowledge, he continued his labors in that work; comprehending, in addition to his own observations, useful communications from practical farmers, bearing their signatures, for it was a general rule with him not to admit any unless thus vouched; yet, if my recollection be correct, that practical work was so little attended to by English farmers, that he once stated its sales as not exceeding 500 copies.—Since then, indeed, improvements have more readily been adopted, and agriculture has advanced with an accelerated pace, and in Scotland with great rapidity. *Reading*, to obtain agricultural information, has been extended, and become fashionable; and book-farming knowledge is no longer despised. This knowledge is now of greatly increased value, because experiments, with a view to improvements, are not, as formerly, made at random, but on principles founded in the nature of things, and which rest on modern discoveries.

As we have no farmers who cannot read—in order to give to all opportunities of reading, I take leave to suggest for consideration, the expediency of forming, in each township in the State, a farming society, of which the members should meet monthly, to converse on farming affairs—to make mutual communications of their practices in husbandry—to commit to writing every practice not in common use, which may be beneficially extended—and to read and examine modern publications on their vocation; particularly those of the State Society, which the Trustees would gratuitously furnish. To these, such township-societies would find it agreeable and useful to add the best periodical publications which issue from the presses of our own country, either through the agency of Agricultural Societies, or of well informed individuals. With these and a few other books on the subject, each township-society would become possessed, at a very small expense, of a pleasing and instructive agricultural library.

After considering the constitution of the soil he has to cultivate, the next object of the farmer will embrace the means of enriching it, and of preserving its fertility. To enrich it, manure will present itself as of the first importance; and of manures, the dung of his live stock will obviously occur as the most essential ingredient. If the manure from the droppings of his stock could easily be doubled, how great would be the farmer's acquisition? That this is practicable I cannot permit myself to doubt. I am rather inclined to think it capable of a manifold increase. At another public meeting of farmers, I had occasion to suggest some means of preserving and greatly increasing this important article; particularly during that portion of the year when cattle are at pasture, but penned at night in the barn yard. Nothing is more common than to see these yards, after being cleared of manure for the spring crops, left naked until autumn, without litter or mud, or earth of any kind, to absorb the urine of the cattle and to mingle with their dung; but all is left open to our burning summer suns, by which the greater part, three fourths, perhaps seven eighths, of the essence of both are exhaled and given to the winds. To prevent this serious loss, I suggested the expediency of giving to the barn yard, as soon as it was cleared out, a covering of any kind of litter, and a coat of earth, mud from low grounds, loam where attainable, or any kind of earth to which a farmer can have easy access; and that as often as once in two weeks, a new coat of earth should be introduced. Weeds from road sides and waste places would make valuable additions to the summer manure. By such means manure may be increased in a four, perhaps an eight-fold degree.

But if in addition to this accumulated summer manure, the farmer, without any of the dung or litter of his cattle, could double the quantity usually made during the winter, would he not consider himself enriched? That this is practicable will appear from a statement I shall now recite; it being the result of careful experiments made in Scotland during a period of ten years. The fact is stated in one of a series of papers written with great ability by Mr. John Young, under the signature of Agricola, (already referred to) and published at Halifax. The urine of cattle produced this mighty effect. I cannot so well occupy your time as by giving the statement in his own words, as abridged by him from the Farmer's Magazine, published in Scotland.

"I should be afraid (says Mr. Young) to hazard my character with the public, by stating in round and unqualified language, the value of this rich juice which is literally wasted and thrown away; and therefore I shall proceed with caution, and give a detail of facts, conclusive in their bearings, and substantiated by the best authority. They are contained in a letter[*] from Charles Alexander, near Peebles, in Scotland; and are addressed to Sir John Sinclair in 1812, for publication. This intelligent farmer had long been impressed with the great importance of the urine of cattle as a manure; and he sets about to discover, by a long and well conducted series of experiments, the best method of collecting and applying it. He began by digging a pit contiguous to the feeding stall, but distinct altogether from that which was appropriated for the reception of the dung. The dimensions of this pit, according to his own account, were 36 feet square, and four feet deep, surrounded on all sides by a wall; and the solid contents were 192 yards. Having selected the nearest spot where he could find loamy earth, and this he always took from the surface of some field under cultivation, he proceeded to fill it; and found that with three men and two horses, he could easily accomplish 28 cubic yards per day; and the whole expense of transporting the earth did not exceed £4 16. 0.[†] When the work was complete, he levelled the surface of the heap, in a line with the mouth of the sewer which conducted the urine from the interior of the building, on purpose that it might be distributed with regularity, and might saturate the whole from top to bottom. The quantity conveyed to it, he estimates at about 800 gallons; but as this calculation was founded partly on conjecture, for he measured not the liquor, it will be better and more instructive to furnish and proceed on *data* that are certain and incontrovertible. The urine was supplied by 14 cattle, weighing about 34 stone each,[‡] and kept there for five months on fodder and turnips. The contents of the pit produced 288 loads, allowing two cubic yards to be taken out in three carts;[§] and he spread 40 of these on each acre; so that this urine in five months, and from fourteen cattle, produced compost sufficient to fertilize seven acres of land.[‖] He states further, that he tried this experiment for ten years, and had indiscriminately used, in the same field, either the rotted cow dung, or the saturated earth; and in all the stages of the crop he had never been able to discover any perceptible difference. But what is still more wonderful, he found that his compost lasted as many years as his best putrescent manure; and he therefore boldly avers, that a load of each is of equivalent value."—"The dung pit, which contained all the excrementitious matter of the 14 cattle, as well as the litter employed in bedding them, and which was kept separate for the purpose of the experiments, furnished, during the same period, only 240 loads: and these, at the same rate, could manure only six acres."

On this statement one remark forces itself into notice. That for the want of such a reservoir for saving the urine of our cattle, more than half of our winter made manure, and this is the farmer's chief dependance, is lost.

It is not stated whether the pit filled with loam was or was not covered: but unless covered, rains would saturate the earth, and thus in a manner exclude the urine conveyed to it from the cattle stall. It should also be noted, supposing the pit to have been covered, that the frosts in Scotland would seldom so freeze the earth in the pit as to prevent the absorption of the urine. The frosts in Massachusetts would doubtless require that the pit should be sunk to some depth, and certainly be under cover. In a word, a barn-cellar would seem to be the proper receptacle for this important manure. How it should be arranged, must depend on the situation of the barn. In Pennsylvania, barns, which are commonly of stone, are often erected by the side of a hill, by which means a story is gained for their cattle stalls. By digging where there is a gentle slope, a sufficient excavation for a barn-cellar would be easily made, to drive in a cart on a level, for carrying in the earth in autumn, and for removing the manure in the spring. With the increased fertility of his soil, the farmer will be able to increase his live stock; and the live stock, in return, will be constantly adding to the productions of the soil.

(*To be continued.*)

FROM THE BUFFALO PATRIOT.

The following article on the subject of *hemp*, has been digested, in part, from several approved essays, in the Plough Boy, American Farmer, and other agricultural works, and combined with the practical information of the subscriber.

HEMP.

Hemp is a very hardy plant, resists drought and severe frost—is easier cultivated, less exhausting, and more profitable than many other crops, with which this does not interfere in its cultivation (except the tobacco crop.) It is sown before and gathered after corn, and requires no attention when wheat is sown, harvested or threshed. It will grow year after year on the same ground, on which, if sufficiently rich, it is the surest crop. It is liable to no diseases, and injured by no insects.

The Soil.

The soil should be deep, clean, dry, rich and mellow. The plant has a tap root, which descends to a considerable depth, and therefore the soil should be deep, and be thoroughly mellowed by deep and frequent ploughings. Fall ploughing, and two or three ploughings in the spring, together with harrowing, so as to smooth the surface (and thereby enable the seed to be sown even, and the hemp to spring up equally, and be cut close to the roots,) are preparatory steps to the putting in of the seed.

The seed, and when sown.

The seed (to the amount of two bushels per acre on middling soil, and three on rich ground) should be sown as early as possible in the spring, after the ground becomes dry and well prepared. Early sowing renders the coat heavier and stronger, enables the hemp to cover the ground early, so as to smother weeds, and before the sun becomes powerful, to shade the soil and preserve its moisture. The seed, after being cast as even as possible, should be harrowed in to as equal a depth as may be, that it may all start together; and a heavy roller should then be passed over, or a bush drawn across to smooth the surface, in order that the hemp may be cut close to the roots.

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[*] "*Farmer's Magazine, Vol. xiii, page* 78."

[†] $21 31. *Seven days work for three men and two horses; each horse, I suppose, in a single cart, a common usage in Scotland.*

[‡] *This would be the weight of a cow.*

[§] *This gives* 18 *cubic feet to each load.*

[‖] *Seven Scotch acres are nearly equal to nine English and American acres.*

Ripening and Harvesting.

When the hemp becomes fit to be cut, the stalks of the blossom or male hemp, turn yellow, become a good deal speckled, and drop most of their leaves, and if the air is still, a cloud of dust rises from the blossom stalks, and hangs over the field. When sown early, it will be fit to cut about the first of August. The above appearances will become indicative of the proper time; and then it should be cut without delay, for if suffered to stand longer (as about one half of the stalks blossom, and the other half bear seed) the stalks of the male will wither and blacken, and the coat be of but little value; and the female hemp, which has stood to ripen the seed, requires a longer time to rot than the male, and consequently both would be thereby injured. *The best way to get seed, would be to sow some thinly, in a separate patch.* The mode of cutting is preferable to that of pulling. A man will cut half an acre per day, and a quarter pulled is said to be a day's work. By the former practice the inconvenience of dust, and the dirt attached to the roots will be avoided. Cut hemp will be worth ten dollars a ton more than the pulled. Knives or hooks for that purpose, may be obtained for about $1 25 cents each. When cut, spread the hemp a day or two to dry it; then bind it and put it up in shocks.

Wretting, (or Rotting.)

As soon as harvested, in order to prevent the rains from discolouring it, proceed as early as convenient to wret it, by placing it in *clean, pure water*, formed by a stream, spring or clear pond. If rotted shortly after cutting, about five days are generally required for the purpose. You will be able to judge by taking out a handful and drying it; and if the stalk of shieves will shake out and separate easily from the bark, leaving it clean and entire, the process of wretting is completed. The bark or lint of hemp is connected with the stalk by a substance which must be either wretted or dissolved before they will separate; produce the separation, and the work is accomplished. Experience will be the best criterion. The water in which it is rotted, should not run rapidly—as it would in that case wash away the coat. You may have three or four wagon loads of hemp to the depth of three or four feet, sunk at a time, but it should be completely submerged, though not suffered to touch the bottom. If separate quantities are put in on several successive days, the days and quantities should be noted, for the purpose of ascertaining which becomes first wretted, and which should, therefore, be first taken up—for if left in the water a day or two, too long, the hemp will be materially injured.

Dressing and Securing.

When rotted, open and spread it, that it may dry soon. The process for breaking and swingling is the same as that for flax. When it grows too long for dressing, (say from 8 to 10 feet) it may be cut into two equal parts without any injury. Be very particular in keeping the long and short hemp separate, and not have the seed and but ends put together. Be also careful to dress it clean. When dressing it, put twelve handfuls in one head, laying them straight the length of the hemp. The handfuls must not be tied, but bind the heads tight, with a small band, about one foot from the but end. It will then be ready to be put into such sized bales as may be suitable. Some bale it in to a box, across the bottom of which four ropes are laid to tie the hemp when pressed into it. When packed it should be perfectly dry, otherwise it will rot.

The following remarks from the Plough Boy, on the subject of water rotting in preference to dew rotting, coincide with the opinion of experienced cultivators. "If the crop is to be dew rotted and got out by hand, its profits must be comparatively small, because it cannot be thus prepared to command the highest price in market, compete in quality with the Russia hemp, much less drive it from our markets. But if the American hemp planter be prepared with proper conveniences to water rot, and with proper machinery to dress and prepare it, we ought not to doubt, much less to despair of his ultimately arriving at a perfection in the production and dress of the article to equal, if not excel the best samples of Russia hemp."

HENRY KIP.

Buffalo, Feb. 18th, 1822.

FROM THE SOUTHERN PATRIOT.

The following communication is well worthy the attention of Planters—it is from the pen of a gentleman who has acquired considerable experience on the subject. If a portion of our agricultural industry and capital could be diverted to the clearing and cultivating of our Inland Swamps, they must inevitably become at no distant day, a source of wealth to individuals and of strength to the State.

INLAND SWAMPS.

The recent as well as former accounts from Europe, respecting the market for cotton, do not authorise the hope of any considerable enhancement in the price of this article for several years to come, for although the demand may increase with the increased consumption; yet when we consider what immense tracts of our own country are admirably well adapted to this culture, in addition to other parts of the world, it is reasonable to suppose that there will be for a considerable length of time more than a sufficient supply; consequently the prices must continue low.—This circumstance would afford us but a melancholy prospect, were we not (particularly in this lower country,) cheered by the reflection, that we can direct our capital, and industry to what would be as profitable and likely to be a more permanently productive culture.—I mean the culture of rice. It is obvious to every man of the least observation, in glancing his eye over the map of this state, that the alluvial districts furnish the greatest facilities for the culture of that grain, which the Father of Political Economy has observed produces a much greater quantity of food than the most fertile corn field. In Carolina, (says he) where the planters are generally both farmers and landlords, the cultivation of rice is found to be more profitable than that of corn, though their rice fields produce only one crop in the year, and though from the prevalence of the customs of Europe, rice is not there the common vegetable food of the people.

If according to the principles laid down by politicians and economists, a numerous population is a great desideratum in the advancement of the wealth and happiness of a nation, it certainly must be a matter of serious concern, to every true friend to this country, to behold lands abounding in fertility, and well calculated under judicious drainage, and culture for the production of this valuable grain now lying waste, and sending forth nothing but the most pestilential miasma, thereby contaminating the otherwise wholesome atmosphere, and spreading disease and death through a whole region of a fine fertile country. Who could believe for a moment without assurances of the strongest nature, that those gloomy swamps and bogs, which now present nothing but desolation and ruin, were once considered as the choicest lands in the state; and what would our ancestors think, could they rise from the grave, and behold a once cultivated country now returned to a wilderness; and hall which once resounded to the voice of festivity and mirth, now either buried under their own ruins, or remaining melancholy monuments of departed grandeur. The gloomy pictures of Ossian are here completely verified. "I have seen the walls of Balclutha, but they were desolate: the thistle shook there its lonely head, the moss whistled to the wind, the fox looked out of the window, the rank grass waved round his head—desolate is the dwelling of Moina—silence is in the house of her fathers."

Let us now enquire into the causes of this melancholy change; these are numerous. There are two, however, so obvious, that we need take no notice of the rest. These two are—1st. The peculiar aptitude of the tide lands which abound in the vicinity of our rivers, for the growth of this favourite staple; and 2dly. The introduction of that plant which has brought millions of wealth into the State, and produced a complete revolution in its agriculture. The introduction of cotton by offering to labour a more productive employment than any other in the agricultural line, at once diverted a vast portion of capital into this new direction, and so great for a length of time was the profit arising from its culture, that it justly become almost the sole object of attention to the agricultural community, and like the Turk, bore no rival near its throne. The consequence was, that no lands but such as were favourable to its growth, were for a moment thought of, except some few of the tide lands which were peculiarly adapted to the growth of rice. As this culture is now, if not overdone, at least brought to its natural limits, it may not be unreasonable to enquire whether the time is not propitious for the consideration of the propriety of restoring the inland swamps to that rank and estimation to which they are fairly entitled. As I am aware that there is considerable prejudice on this subject, and as I would not intentionally mislead any man on this or any other occasion, I must, nevertheless, with great deference to the opinion of those better qualified to judge than myself, beg leave to offer some observations in behalf of the inland swamps, which, when impartially considered, may shew that my views are not so extravagant as they may, at the first impression, appear.

The 1st consideration arises from their extraordinary and inexhaustible fertility, enabling them to produce the very best rice, equal, if not superior to *the very best rice* produced on tide land.

2dly. Their proximity in general, to town, affording an opportunity of bringing their produce to market when prepared, at little cost, or to mill when in the rough.

3dly. Their great comparative security from gales, in as much as they are further removed from the coast, and more protected by woods and forests, than the tide lands in general, and are, when properly drained, less subject to freshes, having to contend only with the water that falls directly from Heaven, or from the immediate adjacent high lands; whereas the tide swamps have often to encounter the accumulated waters of a river of 150 or 200 miles in length, coming down sometimes in torrents and spreading in their course havoc and destruction. But I do not mean to be understood as disparaging the tide lands, or to institute an unfair comparison regarding them, for it must be allowed by all, that there are on each of our rivers tide plantations which are so fortunately situated as to render them the best property in the *Southern country*, as the wealth which their possessors display, most unequivocally demonstrate; but at the same time, I must remaak, that the number is but small, and truth warrants the assertion, that scarce a summer passes that we do not hear of some of the crops being destroyed by too much or too little water. But even admitting that there were no objections to these lands; it is well known that they are held at such high prices that they are above the means of ordinary purchasers, being frequently sold from 100 to 150 dollars per acre for cleared, and in the same proportion when uncleared. Now, I will appeal to every man at all conversant with the subject, whether the clearing, embanking and draining of a tide land plantation, is not a work of Herculean labour and expense, requiring constant and unremitting care to keep it in order. The same remark, it is true, applies with equal force to the inland swamps; but then it must be observed, that the most valuable of them, have been completely cleared, and many partly drained through the patience and perseverance of our forofathers, whose example, in this respect, cannot be too much applauded, and ought soon to be imitated.

The 4th consideration, is the superior health of the negroes. This is an important consideration; for although negro property may occasionally be depressed, as at present from circumstances of a temporary nature, it must, nevertheless, continue to be extremely valuable, so long as we have so many forests to clear, and so long as from the unhealthiness of our climate in the lower country, the most laborious agricultural employment must be carried on by black labourers. Although, therefore, I would not recommend altogether the example of that nation of antiquity, whose chief commerce was to supply the Roman market with slaves, still as they constitute the best part of our property, and are bought and sold frequently to great advantage; the clearing of them must be an object worthy of our attention, and forms an important item in the profit and loss account of the agriculturist.

5th. The better quality of the high lands for the culture of provisions, and may under proper management be frequently productive of good cotton, should that article ever again become an object of desirable culture.

6th. The abundance of the finest timber for building, either on the plantation or for market, if the proper and necessary means were taken to provide for its transportation.

7th. The superior health of the pine lands settlements in the neighbourhood, either for those who cannot afford to leave their plantations to the care of others, or for overseers, to such as are enabled to remove. These considerations, with others, which it would be tedious to enumerate, are, I trust, sufficient to induce those who may be at a loss to know how to appropriate their surplus capital, to reflect whether it would not be worthy of their attention to form companies to buy the present waste lands in the swamps, not far remote from the city, and by proper and systematic drainage, render them valuable, instead of going far from their native land and civilization, as has been too frequently the practice of late, to brave the dangers of the forest, in climes more unpropitious to health than our own. It would be unnecessary to furnish the many historical illustrations, where lands equally unpromising at first, have been made the best lands in the country after they have been properly cultivated. I would barely observe that this was the case with the Carse of Gowin, in Scotland, with the Pontine Marshes in Italy, which were formerly drained and made healthy, and most productive; and after being long left to go to ruin, were in a fair way of being restored to their former state, under the superintending intellect of the Engineer Prony, and assisted by the munificence of that master spirit of all that was great and daring, the unhappy Exile to St. Helena. But when I reflect on the apathy that every where prevails in this lower country, I really confess that I indulge no hope of seeing any better state of things. I therefore must dismiss the subject, under the sincere impression that it is worthy of more consideration than it seems destined to receive.

RUSTICUS.

CURE FOR WEAK EYES, recommended from actual experience.—Take a small lump of white copperas—say about the size of a pea; put in a small phial, holding about two ounces of water; carry this in the pocket, and occasionally, taking out the cork, turn the phial upon the fingers end, and thus bathe the eyes. This will positively effect a real cure in a short time.

FOR THE AMERICAN FARMER.

Pittsfield 6th June, 1823.

Dear Sir,

I have noticed an article in your No. 5, of vol. 5, of "*a New Jersey Subscriber*," on the subject of *ruta baga*, in which he expresses his doubts, if it be a profitable crop, and gives his reasons.

Equally desirous with your correspondent of eliciting practical knowledge, I am induced to state, that five years experience, satisfies me that it may be raised to advantage, *wherever the climate is adapted to its culture*:—Because,

1st. To raise a good crop, it is necessary to put the land in a good state of tilth.

2d. The requisite care of the crop, while it extirpates weeds, prepares the soil in the best possible manner, for stocking to grass with the succeeding crop of grain.

3rd. All kinds of live stock are fond of it.

And 4th. It affords a most succulent food, at a time (the spring) when most wanted for every kind of stock.

Having remarked the advantages arising from the turnip culture in Europe, I was induced soon after entering on Agricultural pursuits, to give it a fair experiment; notwithstanding the general opinion in this section of the country, that turnips *could not be raised*, except on *newly cleared, and burnt land*; consequently, they were only cultivated in a partial manner, and merely for culinary purposes.

In 1817, I selected for the purpose an acre in a field, that might be termed *worn out land*; that is to say, it would produce a half ton of hay to the acre.—The soil, a dry gravelly loam—gave it three ploughings and two harrowings before drilling:—on the 24th June, manured with twenty-six loads of barn yard and hog's manure, and sowed the common English turnip—gave it a top dressing of about fifteen bushels slacked lime, and fifteen bushels leached ashes. It produced eight hundred and sixty-three bushels, and received the premium of the Massachusetts Agricultural Society—very many of the turnips weighed from ten to twelve pounds; generally from six to eight pounds.

Having raised at the same time a small quantity of Ruta Baga, from seed procured direct from Russia, I was enabled to make a comparison of the relative value of the two kinds, and hence am satisfied, that with us at least (on account of our long winters and late springs) the Ruta Baga, is preferable to the common turnip, because the latter, can only be used to advantage for fall feed, whereas the former will keep good through spring—and at this time I have them in perfection. It is true, an acre will not produce so many bushels of the Ruta Baga, as of the common kind of turnip, but that, I consider, as fully compensated, by the greater quantity of nutritive matter they contain.

Since 1818, I have raised the Ruta Baga every year, and may safely state, that, in no year has the crop been less than five hundred bushels per acre, and entirely free from worms.

Notwithstanding this favourable result, it is with much regret, I am obliged to add, that I am, as yet, almost alone in this county, in the cultivation of turnips as food for live stock, although our soil and climate are peculiarly adapted to them.

AGRICOLA.

The climate of New England is so much moister than that of the southern states, that we apprehend both potatoes and turnips may well succeed there, in seasons, when they would fail even with us in Maryland. The suggestions above, are valuable and conclusive—however, as to New England, at least—and yet we see that even there, this great resource for winter feeding of stock is neglected. What immense advantages have resulted from the turnip culture to England. We regret that the communication from Agricola, was not sooner received—but any thing from his pen will be at all times highly acceptable.—*Edit. Am. Farm.*

GEOGRAPHY OF PLANTS.

EXTRACT TO THE EDITOR,

Duncansville, *S. C. May*, 21, 1823.

DEAR SIR,

I return you my thanks for the seeds you have so often sent me, all of which I divide among my neighbours, or plant myself. The cotton seed from the *Isle of France* failed—I have one stalk of the Ohio corn, (Mr. Rose) planted on the 8th ultimo, in good land, this day in tassell, and only 18 inches high. The golden Sioux, (the Missouri) is now in full *silk*, planted the 12th ultimo. The greatest objection to these early kinds of corn, is, that they mature too soon with us, and it appears to me from the experiments of this, and former years, we should not plant them till the last of this month or early in June. My first trial of the Connecticut yellow corn, planted in March, did not grow more than 4 and 5 feet high, yet when planted on the 13th of June, after oats, grew 10 and 12 feet high, and made over 50 bushels—the 'Ellicott' corn, and the Brazille, with the '(Pickering)' millet, are promising. My acre of gourd seed corn, is fine, the first tassell came out this day, and the finest stalk from the top of the bed (a flat one) to the end of the longest blade, is eight feet ten inches high. This first *crop* or planting is so thick (more than 8000 stalks) I am not sure what may be the result, 4 or 5 weeks will determine it. About the 5th of June, I intend to plant the 2d crop in the alleys, this will consist of about 3000 stalks. If I had not the result of the last year's crop from this acre—I could not from the present appearance of the first crop, expect any thing from the 2d planting.

J. S. B.

FOR THE AMERICAN FARMER.

WOOL.

Fairfax county, *Virginia*, *June 6th*, 1823.

DEAR SIR,

In compliance with the request of one of your correspondents, I state, that I have just finished shearing a flock of 525 of mixed merino sheep, from which I have obtained, 2368½ lbs. of wool, free from tags, giving an average of a little more than 4½ pounds. My average is not as great as it has been in former years, in con sequence, (I presume,) of my flock's containing at this time, a larger proportion of breeding ewes than usual. I have always been in the habit of preparing my wool for market, by laying each fleece, as it is taken from the sheep, on a table, taking off all around, about two or three inches of the coarsest wool, which is reserved for domestic purposes, and rolling the remainder up very nicely and firmly, with the inside of the fleece turned out. The whole is then packed away in coarse bags; and a wagon, will, at a single load, take a thousand dollars worth of it to market. My wool, thus prepared, has been readily sold, for the last four years, at 40 cents per pound, in Alexandria; and I am very much inclined to think would bring a great deal more, in the northern markets. But from some cause or other, we find it very difficult to ascertain the market price of wool in other places. I last year, made an enquiry through your paper, on this subject which was never answered. The growers of wool would certainly find it to their interest, to communicate freely with each other, on this subject. And wool is now becoming too important an article, not to be entitled to some little attention, in a paper, devoted, like yours, to the agricultural interests of the nation.

I have been told, that during the last summer, 70,000 lbs. of wool were imported from Europe into Boston alone, and sold, at public auction, at from 75 to 125 cts. per lb. Is this the fact? And if so, what was it's quality and condition? Will not some northern wool grower reply to these enquiries; and tell us also the usual price of American wool in the northern markets? In Ohio, I have been told, it readily commands from 50 to 100 cts.

I am no friend to any unnecessary commercial restrictions. But if congress have thought proper to give encouragement to our manufactures, is there any consideration either of justice or state policy, which should withhold a similar encouragement from the raw material, of which the manufacture is made?

F.

The Editor expects, with confidence, that the above article will attract the notice, and be favoured with an answer from several of his patrons in Connecticut and Massachusetts. How can gentlemen expect answers when they want information on some points, unless they communicate it when it is asked on other subjects, within their knowledge and experience?

FOR THE AMERICAN FARMER.

WOOL.

As some of the commission houses, for the purchase of wool, are circulating a report, that their *eastern* friends, write instructions for them not to bring good wool at more than twenty cents per lb. As this article must be *reduced* in price, in consequence of the war in Europe; and as this is undoubtedly a mere eastern trick, to obtain wool below its real value, I beg leave to call the attention of the wool growers to the same, and to suggest the propriety of forming themselves into a society, to obtain information on this, and also on all other matters relating to the growing and disposing of this indispensable article.

ALBION.

TO THE EDITOR OF THE AMERICAN FARMER.

HONEY.

Newbury Port, Massachusetts, May 28th, 1823.

J. S. Skinner, Esq.

"A lover of honey," in your paper, No. 9, vol. 5, says "there is a gentleman in the lower part of your native county, who knows much better how to take honey from bees than the German, mentioned in your paper (No. 48, vol. 4.) and with *less expense than Blake's patent hives*; and goes on to state the process of taking off the top of the hive, &c. I confess I am not authorised to answer for your numerous patrons, but have the sanity to think a majority would prefer a hive like Mr. Blake's, that the top could be lifted like a chest cover, and the honey taken in a draw or box, that would be no disgrace to any table, if placed on it, to the method of knocking off the top of a hive, and breaking up a quantity of comb, as it must necessarily be broken; to say nothing of dropping the honey, and leaving the hive in a state of ruin, that would take the industrious little animals a long time to repair—even if the extra expense of the hive was 50 cents—as it cannot exceed that, unless you have a lock, (which is an improvement) and would probably add 25 cents more. If your correspondent has recommended a better way, of course it will be adopted, on the other hand, if Blake's hive is not considered too expensive, this notice may help him to sell a right.

B. P.

EXTRAORDINARY POWER OF LOCOMOTION, OR QUADRUPED TURNED BIPED,

Extract to the Editor, dated Allentown, N. J. June 10, 1823.

"A few days ago, in passing a flock of sheep, at some distance from me, I observed something of uncommon appearance moving about amongst them; it was owing, I found upon approaching nearer, to a lamb following its dam, *walking* upon its *fore feet*, with its *body erect*. Its hind feet, I was told upon inquiry, and legs as far as the gambrels, were frozen off, the night it was lambed, and very soon afterwards, it acquired this extraordinary kind of motion. It is three months old; quite fat, and of ordinary size for its age. It *grazes* and *sucks*, *resting wholly* upon its *fore feet*, with its body in the position just mentioned; and will walk, if not urged too fast, a quarter of a mile at once, without inconvenience.

The above fact may be familiar in the sheep districts of colder countries, but to me, and as far as I can learn, to the people of this neighbourhood, it is altogether novel, and exhibits the resources of the animal economy for the purposes of locomotion, to an extent, of which I have heretofore had no conception.

FROM THE NATIONAL INTELLIGENCER.

COMPOSITION TO PRESERVE WOOD.

Mr. Gales,

It becomes important to have a simple composition, in the application of which, the durability of bridges constructed of wood will be extended for a long period of time without a roof; whereas; if left exposed to the weather, ten years is their estimated limit of duration. It well deserves the attention of the directors of the city bridge company, for, as the timbers are new, well seasoned, and have suffered no apparent decay, the mixture being now put on will be in time to prevent the operation of the rot.

I send you two receipts, one for the preservation of wood or timbers liable to be injured by the weather; and one for the roof of a house, to defend it not only from the weather, but also from fire, and I doubt not, they will be both acceptable to many of your subscribers, among whom I am

ONE.

City of Washington,
17th June, 1811.

Composition for preserving weather-boarding, and all other work liable to be injured by the weather.

Lime, it is well known, however well burnt, will soon become slacked by exposure in the open air, or even when confined in a situation, it not remarkably dry, so as to crumble of itself into powder. This is what is called air-slacked lime, it contradistinction to that which is slacked in the usual way, by being mixed with water. For the purpose of making the present useful composition to preserve all sorts of wood works exposed to the vicissitudes of weather, take three parts of this air-slacked lime, two of wood ashes, and one of fine sand, pass them through a fine sieve, and add as much linseed oil to the composition as will bring it into a proper consistence of working with a painter's brush. As particular care must be taken to mix it carefully, it should be ground on a stone slab with a proper muller, in the same manner as painters grind their white lead, &c. But where these conveniences are not at hand, the ingredients may be mixed in a large pan and well beat up with a wooden spatula. Two coats of this composition being necessary, the first may be rather thin, but the second should be as thick as it can conveniently be worked.

This most excellent composition for preserving wood when exposed to the injuries of the weather, is highly preferable to the customary mode of laying on tar and ochre. It is indeed every way better calculated for the purpose; being totally impenetrable by water; and so far from being liable to injury by the action of the weather, or heat of the sun, that the latter, though such a powerful enemy to tarred and ochred pailings, &c. even hardens and consequently increases the durability of the present proposed composition.

Another receipt for the roof of a house, to defend it from the weather and from fire.

Take one measure of fine sand, two measures of wood ashes well sifted, three of slacked lime ground up with oil; laid on with a painter's brush; first coat thin, and second thick.

I painted on a board with this mixture, and it adheres so strongly to the board, that it resists an iron tool, and put thick on a shingle resists the operation of fire. I used only a part of the mixture; what remains, continues in an iron pot; water has lain on the mixture for some time without penetrating the substance, which is as hard as a stone.

FROM THE MORNING CHRONICLE.

TO THE PUBLIC.

As the season of the year is approaching, when persons owning horses become alarmed, in consequence of these animals passing off bots with their feces, I have thought proper to endeavour to remove such fears, by laying before the public some facts, which I have noticed, in the course of twenty-four years experience.

Bots, are generally found adhering to that portion of the horse's stomach, which is lined with a continuation of the Œsophagus membrane, to about one third or little more of its extent; sometimes they are found attached in great numbers to the pylorus, *or the posterior opening of the stomach.* The time that horses begin to pass them off, is generally in June; and so on through September to October. The bot remains in a Chrysalis state for an uncertain, but short time; and then assumes the same character, as the parent fly. To prove, without the possibility of doubt, that the bot is produced from the fly which deposites its ova, on the hair of the horse, I took twelve bots that came from twelve horses; these

I put into separate vials, and with paper wrapt round a quill barrel, I made stoppers to give ventilation, and noted on each vial, the day, that each bot came from the horse, this was convincing, as to the uncertain time of the Chrysalis; for some produced the fly in twenty one days, others in forty-nine days, and others in the intermediate time. The flies thus produced, were the same as those that deposite their eggs so plentifully on different parts of the horse. What it may be, that causes this difference of time in the Chrysalis admits of speculation. It is proper to notice, that a bot taken from the stomach of a dead horse, cannot produce the fly, as in this stage of its progress through the canal, it is not sufficiently matured.

There is no worm that we know of, in the intestines of the human subject, which makes such an annual rotation; and in consequence of their long continuance in the intestines, we find numbers of the human family destroyed by them. Whereas, it may be presumed there would be few or none killed by worms were their rotation annual. And as bots perform this annual course, it can be no cause of surprise that they are not so destructive, as they are commonly supposed to be. Was it a fact that they were thus destructive, we should find very few colts raised to the age of four years, for colts generally run out until they are considered ready for work, are fully exposed through the summer to the action of the fly.

If a horse, by symptoms, expresses much pain, it is said to be the bots; and so much does this opinion prevail, that people imagine, bots kill more horses than any other disease. If we reverse this opinion, we shall perhaps come nearer to the fact; for in all probability there is no disease that destroys so few.—When he is said to be sick with bots, it is generally *spasm* or *inflammation* of the intestines. That bots never kill I will not assert, though there are eminent veternarians in England who say they never do.

It is a common opinion, that a few bots are essential to the health of the horse. This erroneous idea arises from people opening but few after death, and those few being found to have bots in them. But in the many hundreds that I have opened, there have been some in which not a bot was to be seen; and not one of these may be supposed to have died for the want of bots.

The motive, I have in making this communication is to remove the fears that prevail with some persons, when they see bots coming from the horse, as if they were so numerous as to kill him immediately. But for the information of such persons as would rather give something to facilitate their discharge, when they see a few coming away, I would advise one ounce of powdered savin, to be given in the horse's feed, once a day for three days. At the season above mentioned, I have recommended this medicine to such persons as I could not persuade, to be satisfied with the course of nature; and they were very much astonished at the quantitry of bots, brought off by it.

JOHN HASLAM, Veterinary Surgeon.

Baltimore, April 13*th*, 1823.

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FROM POULSON'S AMERICAN DAILY ADVERTISER.

UNION CANAL.

A traveller returned yesterday from the summit level of this highly important work, and after spending two days there, and inspecting every part of it, he can safely aver that the utmost diligence has been used in excavating the broad and deep channel which is to connect the rivers Tulpehocken and Quittipahilla. Contracts are now in hand for removing the residue of the limestone rock, and the feeders are nearly all in a state of forwardness, three of which flow at present into various parts of the Canal. One section of the summit Canal was full, and presented to the eye a most beautiful and satisfactory evidence of a sufficiency of water; there being only one feeder, out of seven, (which are the property of the Company,) employed to fill it, which was done in five days. There can be no doubt, indeed there never was any, of a supply of water, and, in less than three months, the whole length of the summit will be filled. Wherever sink holes have appeared in the limestone rock, they have been permanently stopped by puddling; in one instance, in a section of the Canal nearly a quarter of a mile long, in which the water has lain all winter and spring, without the smallest leak through stone.

All the excavation has been executed in a workmanlike manner, and five miles of the Canal to the east of the summit are under contract, and fast progressing. The Engineer, Mr. White, who is perfect master of his business, says, that the excavation this summer, will extend beyond Womelsdorf, and all the locks at the end of the summit be built. Materials for the gates, &c are on the spot, and stone is preparing, while a strong gang of men are digging out the lock pits.

In short, the prospect is entirely satisfactory, and the most sanguine hope is entertained of the whole Eastern section, down to the Schuylkill, consisting of 34 miles, being completed and fit for boating in 18 months. The Western Section, from the summit to the Susquehanna, is much the easiest, and will not take so long to finish; so that the public may expect, in three years, to see the commerce of the Susquehanna brought by the Schuylkill to our wharves on the Delaware.

CHESAPEAKE AND DELAWARE CANAL.

Mr. Wright, the engineer, has arrived from New York. He will proceed, after a thorough examination of all former surveys, levels, &c. to the Peninsula; and having made the necessary examinations of the ground, waters, &c. report what route, under all circumstances, ought to be preferred for the Chesapeake Canal. To the performance of a duty upon which materially depends the success of this great work, there is reason to believe that Mr. Wright brings an entire independence of mind, an unbiassed judgment, scientific acquirement, and practical knowledge and experience. It is highly honourable to an individual to be selected for such a purpose. Public expectation is directed to Mr. Wright's decision, and will be followed by entire confidence. The managers of the company have done well in chusing an individual as umpire on this occasion, who adds to competency as engineer, in utter freedom from all prejudice; and if their final decision on the important question of the route be guided by his counsels, they will doubtless proceed with safety, and acquit themselves of the duty of their stations so as to satisfy the public and the stockholders.

Mr. Wright's report will be anxiously expected. A gentleman has been for some time engaged in sinking shafts, &c. preparatory to the commencement of his labours, in which he will be accompanied by Messrs. Strickland and Randal, and it is to be hoped by one or more of the most distinguished officers in the United States Engineer Department, for whose assistance, it is understood, application is made to the Secretary of war, and the President.

[*Franklin Gaz.*

Extract to the Editor of the Franklin Gazette, dated

PITTSBURGH, May 15.

"I have been delighted, since my residence here, to find the great revival and activity in business. Several manufactories have lately been established, and I understand are going on prosperously. Added to this, the course of the western trade has reverted to its old channel, and this city, which, if I may be allowed the expression, is the western capital of Pennsylvania, exhibits the most lively appearance. Already there have been 43 departures of steam boats, averaging sixty tons each, amounting to 2580 tons of goods, down the Ohio river, independently of the immense amount carried in arks and other boats.

I have just read a letter from the postmaster at Canonsburg, which narrates the circumstances of an attempt to set fire to the post office in that place. The effect proved abortive, and every exertion will be made to detect the incendiary. But slight injury was sustained."

Miscellaneous.

SPEED OF HORSES.

The following may be given as a just account of the most extraordinary English performances *in speed* upon the turf.

At New Market, there are two courses, the Beacon and the round; the first is exactly four miles, one furlong, and one hundred and thirty-eight yards, or 7398 yards, being three hundred and fifty-eight yards over four miles.—Childers run this course in seven minutes and thirty seconds, carrying nine stone, two lbs; and in doing this he must have done 4 miles in 7 minutes and 7 seconds. The Round Course is 3 miles, 6 furlongs, and 93 yards, or 6693 yards, being 347 yards less than 4 miles. Childers run this course in 6 minutes and 40 seconds, and if he could have continued *this*, would have done 4 miles in 7 minutes. It has never been questioned, that Childers was the swiftest horse ever known in England; and it is alleged, that no other horse has ever run the Beacon Course in less time than 7 minutes and 50 seconds, nor the Round Course in less than 7 minutes. He was foaled in 1715.

Bay Malton was bred by the then Marquis of Rockingham, and foaled in 1760. He was esteemed the first horse of his year in the king dom, and won more prizes of consequence and value than any horse of his time. His most celebrated performance was 4 miles in 7 minutes, 43 seconds and a half, and done over York.

It is said that Col. O'Kelly's horse Eclipse, ran the same distance over York, in eight minutes, with *twelve stone*, though going only *at his rate*, without any inducement to speed. This horse stands second to Childers alone, and was foaled in 1764, during the eclipse of that year.

Merkin, a fox hound bitch, ran a trial of four miles, and crossed the ground in 7 minutes and half a second. This dog belonged to Col. Thornton, and is more distinguished in her family for speed, than Childers in his, and has certainly outdone every thing in actual performance. She once challenged any hound of her year for 10,000 guineas, to run five miles over New Market, *giving 220 yards.*

Can it be presumptuous in me then, to assert, that there is not on record any horse other than Childers, that has done the full fair four miles in less time than Sir Henry did his first four miles on Tuesday, and that there is no horse on record that has done the same disatnce in the same time with Eclipse at his age.

JOHNNY RAW.

The following interesting circumstance is communicated from the most respectable source, and there can be no doubt of the correctness of the statement.

Extract of a letter from London, Nov. 23.

"A great object of curiosity is now preparing on the Thames—a new Steam Vessel, intended for Calcutta. Her engine and boiler occupies only one-fifth part of the usual space—her furnace consumes its own smoke, will perform with one bushel what formerly took one chaldron of coals: her boiler is constructed to return its own steam, without one particle escaping, so that once filled it is enough for the voyage, which it is calculated she will perform in 36 or 40 days. The invention is American—PERKINS is the man, who does honour to his country. In two months time this vessel will sail (or go) for Calcutta."

* * *

George Clerk, the coachman of a Bristol and Bath coach, was tried under the new Act of Parliament, for Manslaughter, in having furiously driven a coach so that it was upset, and a person named James Hamilton killed. The case was clearly proved against the prisoner, and the Jury immediately found him *guilty*.

Mr. Justice Burrough, on addressing the prisoner, observed, that by a recent Act of Parliament he was empowered to sentence him to transportation for life; but as this was the first instance which his Lordship knew of, of a conviction for the offence of furiously driving, he did not think it necessary to visit him with the full measure of punishment which the law enabled him to inflict, and he should impose a more lenient punishment, in the hopes that that would operate as a first warning to those of his class. His Lordship, however, could not help observing, that a great portion of the evil was occasioned by the inattention of the proprietors themselves, who encouraged this system of driving furiously, for the purpose of out-stripping each other, and getting more money by performing journeys in a shorter time. Such a rate of travelling as twelve or fourteen miles an hour by a coach laden with passengers, was a rate which could not be sanctioned, for it was dangerous and illegal, and those who adopted it must beware, for they did it at their peril. He was afraid, however, they would go on driving faster and faster, until by repeated accidents it became necessary to put a stop to the system, by sentencing those who in the pursuit of it occasioned the death of any of his Majesty's subjects, to be transported for life. His Lordship sentenced the prisoner to be imprisoned for twelve months in the county gaol, and during that time to be kept to hard labour at the treadmill. There were many *Jehus* in Court, amongst whom the conviction and sentence appeared to excite a strong sensation.

At the Warwick Assizes, a plaintiff of the name of Heely, got a verdict af £100 damages against Waterhouse and others, for a broken leg, occasioned by the overturning of defendants' coach, the Balloon, on which Paintiff was a passenger.

John Bolt, convicted at the late Exeter Assizes of having shot at Jane Jusland, was executed on Friday the 4th inst. He said, to the last, that his love for her was unabdted, and that he was in a state of frenzy when he attempted her life.

In the case of Moses Long, convicted at the Suffolk Assizes of a burglary in the house of Mr. John Peck, Brockford, a curious confession was made by the prisoner, from which it appeared that he entered by breaking a pane of glass, marched about the house, throwing open ail the doors; lay down on the bed and slept, he supposed above an hour; came to another bedroom, and again lay down, but in a few minutes got up again, and "squatted down" upon the stairs; went into the kitchen, and ate a candle which he found there. He afterwards took up a parcel of bank-notes, and laid them down again, thinking them letters. Seeing something which looked like a desk, he opened it, and putting his hand upon some black and white stripes, to his great astonishment and terror a noise proceeded from them, and he ran away as fast as he could; this was a piano-forte! The Court was convulsed with laughter at this confession, from which, and other circumstances, it appeared that the prisoner, who was an inmate of the workhouse, was a man of very weak understanding, but capable of distinguishing right from wrong.

A man of the name of W. Harris, a convicted felon, now confined in the gaol of Portsmouth, has confessed that he was concerned with Hussey, and another man of the name of Lee, in the murder of Mr. Bird and his housekeeper, at Greenwich, about five years ago; and he has also confessed he was concerned in the murder of Lieut. Johnson, on the Deptford road, about 14 years ago.

* * *

☞ An adjourned special meeting of the "Maryland Agricultural Society" will be held in the room over the Post Office, in the city of Baltimore, on the 23d inst. for the purpose of taking into consideration, the form of constitution, which shall then be submitted to their deliberation, by their committee appointed to propose the same.

By order, JAMES HOWARD, Sec'ry.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 20, 1823.

We placed on file for publication as soon as received, the valuable address from Col. Pickering, as one of those good things, which, being the fruit of sound judgment, and founded on great experience, would wear well, and be well received whenever we could find room to insert it. We regret that the arrangements of the paper did not conveniently admit its insertion entire, in one number—but it will be found that, as is usual with his communications, the address is so systematically framed, and the different subjects, so well defined and separated, that our division of it, will not break the continuity of his remarks on any particular topic.

A new use and application of sheep-power.—Gen. Ringgold, of Washington county, who sheared this year, upwards of one thousand sheep—and has marked 1600 for shearing the next—kept this flock *pasturing in his wheat* until near the middle of April. By this means the fly, then in the young shoots, was in a great measure extirpated. His system is to have them confined in their range, to a given space—and so pass them regularly over the whole field. This too, has the effect of distributing their manure equally.

* * *

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7—sales—White wheat, $1 42 to 1 46—Red do. $1 42 to $1 43—Rye, 75 cents—Corn, 50 to 52 cents—country Oats, 40 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Buckwheat, $1 50—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 33 to 34 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $2 75 per bbl.—No. 2, $2 50—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (Firkin) 14 cts per lb.—Eggs, 12½ cts. per doz.—Hay, $14 50 to $15 per ton—Straw, $9.

MARYLAND TOBACCO.—Fine Yellow, none—good do none—Fine Spangled, 15 to $18—Fine Red, $10 to 16—good do. 5 to $8—Dark $3 to $4 50—Seconds, $1 50 to $8.

Sales.—1 hogshead $24—3 do. $12—3 do. $11—1 Second, $4—raised by Mr. John T. Wall, Truman's Point, Patuxent.

The following sales have been made within a few days, by a commission merchant here.—15 hhds. Patuxent Fine Red, 10 first, $13 to $16—5 Seconds, at $6—William D. Bowie's crop—28 do. do. do. 17 First, $13 50—11 Seconds, $6 50—William Bowie's do.—20 do. do. 16 First, and 4 Seconds, averaged over $10—John B. Mullikin's crop—48 do. do. 35 First, $10—13 Seconds, $7—Benjamin Oden's crop—19 do. do. good Red, 17 at $8, and 2 at $5.

The above prices are fully maintained, and the good qualities are becoming scarce in the market—some further inquiry for the most inferior midling descriptions, same as last report.

Botetourt Springs.

We understand a watering place has lately been established in Virginia, called the Botetourt Springs, which is attracting a good deal of attention, and is likly to become a place of considerable public resort. There are two springs—one strongly impregnated with sulphur and magnesia—the other a tonic. The waters of which have been found very efficacious in a variety of diseases. There are hot, cold and shower baths. The buildings are of brick, and the accommodations throughout, are in a style of neatness and comfort, that few other watering places in the United States, it is said, can boast. It is situated in a most beautiful and healthy country on the main road, leading from Baltimore to Tennessee, (Alabama,) and the other South-Western states—and is about midway between Fincastle and Salem, Botetourt county.

FOR SALE

At a low price and on a long credit, the FARM on Elk Ridge, occupied by Mr. H. Scott, and formerly owned by Luther Martin, Esq. containing about eleven hundred acres.

It is situated about eleven miles from this city, near the Washington road, and is considered remarkably healthy—The situation is handsome, and the land easily improved by plaster and clover. This property will be divided if required, and immediate possession given—For terms apply to

ROBERT & JOHN OLIVER.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for Printing or Binding, with proper directions promply attended to, addressed to J. Robinson, Baltimore.

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE, TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

No. 5.

The great error of popular conjecture, *in overrating, to an enormous extent, the difficulties and expense of opening a Canal.*

40. Few occasions, I *believe*, have occurred, I know of none, upon which the public mind has strayed more widely from the truth than the present. In a pamphlet entitled "Considerations on the Great Western Canal," printed at Brooklyn in 1818, page 37, it is stated, that, *when it was first seriously contemplated*, to embark in that undertaking, it was objected, that, *the making of three or four hundred miles of canal, would even baffle the whole collective energies of the Nation, at this early stage of our history, and that twenty millions of dollars was the round sum frequently set down as the probable cost*; whereas it has been proved by subsequent experience that only one state, single handed, will be entirely adequate to accomplish the object, and for less than *one fourth* of the money. I might have said for *about one fifth*, as may be thus explained: the whole cost, as will hereafter be quoted, was estimated at $4,571,813, and from its being since ascertained that the actual cost had generally fallen below the estimate, it has been understood that the sum total was in a fair way to be reduced half a million of dollars, which being taken from the sum above stated, the remainder will exceed *four* millions, that is the fifth part of *twenty* millions, by only a small amount, in proportion to the whole. Thus, it appears that, in this instance, public conjecture was nearly five to one above the reality.

41. Having for some years past been in the habit of devoting particular attention to the subject of canals, I have had many opportunities of hearing the inquiries, and becoming acquainted with the sentiments of others. Most of the estimates which have thus come to my knowledge, have been still more extravagant than the one above mentioned. Even *the lowest*, have been greatly above the probable cost, as it may, with rational certainty, be calculated from *practical* and other *substantial data*, both in America and Europe. Some have been ready to conclude, that to open one hundred miles of Canal from Baltimore to the Susquehanna, would be literally impossible; or, if possible at all, the city, should it be sold, would hardly produce an amount sufficient to defray the expense; others that the whole state of Maryland would be unable to furnish the money that such a prodigious undertaking would require. By an intelligent person, in other respects, but from want of opportunity, having little acquaintance with the business of cutting Canals, as is, *in general*, the case throughout the great mass of our population, I was lately asked whether in my opinion *ten millions of dollars* would be a sum sufficient; by another, whether *eight millions*, would in my estimation, answer; and again, whether six millions were likely to be adequate to the purpose. To these, and all similar inquiries, my reply has usually been, that I had no idea of any such amount being necessary; that on the contrary it was my firm persuasion that *one million of dollars* economically and judiciously expended, would be *more than sufficient* for meeting every expense. For the accuracy of this persuasion, I have frequently assigned my reasons to individuals, and as I believe them to be well founded, am now willing to submit them to the consideration of the public.

42. The late B. H. Latrobe, *a professional engineer* of extensive experience, and whose opinion is appreciated as being entitled *to the greatest respect*, in an essay published over the signature B, in the Baltimore Federal Gazette, under date 23d September, 1818, has estimated the cost of the Susquehanna Canal, now under discussion, supposing its length to be 100 miles at $3,545 per mile, if cut through *no worse ground* than the Canal of New York; or, should the ground be *more rocky and difficult*, as he supposes would probably be the fact, he has on this account conceded that the cost per mile might amount to $5,000, that is, half a million of dollars for the whole canal, should the distance be prolonged to one hundred miles.—Until lately, I was also inclined to believe that their route was likely to be much more advantageous for opening a Canal than any that could be selected between Baltimore and the Susquehanna; but from accounts, I have lately read, as well as verbal information that I recently met with, of their Herculean labours in opening the entire channel of their Canal through solid and slaty rock, very tedious to be excavated, and being likewise informed that the making of a Canal on sideling ground is attended with little, if any more difficulty, than if it were level, my prospect in relation to our route now is, provided we can bring a sufficiency of water to the summit level, that it will not be near as much worse than theirs, as I had formerly anticipated.

43. It is well known, that it is usual for houses to be built by contract, after the cost has been estimated by a competent architect. It is also common for Turnpike roads to be made, and Canals to be opened in like manner, and almost every kind of mechanical business is performed at a price previously ascertained. Hence it follows that the cost of opening a Canal is susceptible of being estimated as well as that of making a Turnpike road, or building a house. I am not about to imagine, however, that an estimate made in New York, in Philadelphia, in the District of Columbia, or at Richmond in Virginia, of the cost of building a house of a certain description, would be sufficiently accurate to be made the foundation of a contract for building a similar house in Baltimore. I am aware, that for this purpose, all the particular facilities and difficulties of the undertaking would require to be attentively considered. I am also aware that equal attention would be indispensible, were a contract proposed for the opening of a Canal in Maryland. But if it were known that the cost of a number of houses, similar to others that were wanted in Baltimore, had been particularly estimated in the places aforesaid, and that the accuracy of the estimates had been *substantially* verified by some being actually built, the citizens of Baltimore would, *no doubt*, consider the evidence conclusive, that if the amount of the estimates thus made, and *confirmed by experiment*, did not exceed six, seven, or eight thousand dollars, owing to the cost of labour and materials, being about the same, the cost would be about the same *with us* as *with them*. Thus, a conclusive criterion would be furnished for deciding to what extent it *would*, or *would not* be advisable to engage in the building of such houses in Baltimore. In like manner, were Canals of the size required, found to cost only from six to seven, or eight thousand dollars a mile, in other parts of the world, it might very rationally be concluded they would, in all probability, cost about the same, or at the very utmost, not more than ten thousand dollars a mile in Maryland, unless it were known that the route was particularly difficult. In other words, a well founded criterion may thus be afforded for deciding with certainty to what extent it *may*, or *may not*, be advisable for the state, *consistent with the extent of its resources*, to embark in the opening of two or more Canals, or only of one.

44. But as no estimate could be made of the *cost of a building*, without knowing its size, and the style of its workmanship, so neither is it possible for *that of a canal* to be developed, without a previous knowledge of its dimensions. This being a question of superior importance, it appears to be the more indispensable that it should be minutely investigated. Such an examination may be the means of preventing many thousands of dollars being expended to very little purpose.—It will readily be admitted that the breadth and depth of any canal intended to be united with the Susquehanna or Potomac, ought to be adapted to the size of such boats as were best adapted to river navigation; so, as neither to occasion an unnecessary expenditure in opening the Canal, nor to counteract its utility afterwards, when in operation. In page VI, of the introduction to a collection of public documents relating to the New York Canals, published in 1821, it is stated that boats of 100 tons may be navigated on their waters; that their whole length will be 414, the Erie Canal 353, and the Northern Canal 61 miles; that the expenses of both are estimated at $5,371,814, the sum of $4,571,813 for the Western, and $800,000 for the Northern Canal. The depth I find, page 104, to be 4 feet. Thus, the excavation required for every yard in length is 15 cubic yards and one ninth; and the average cost per mile, a small fraction under $13,000. The aggregate rise and fall is elsewhere stated to be 661 feet 4 inches.

45. It is abundantly evident, that the less the cross-section of a boat can be, that is presented to the water, the less will be its resistance. By experiments also, which are recited in the New Edinburgh Encyclopedia, article Navigation Inland, page 411, it appears, that supposing one pound weight to be divided into 100 parts, the resistance against a square foot, as of a thin plate immersed in a stream, was found to be 181; against a square foot, as of the front of a box one foot long 142,—and against an equal front of a box 3 feet long 129 of those parts. Hence it follows, that the greater the length of a boat is, and the shorter its beam, that is, the less its width in proportion to its tonnage, the less will be its resistance. In conformity with this principle, it is understond, that the form of boat, *most approved*, both upon the Susquehanna and Potomac, is usually from 70 to 80 feet long, and between 7 and 8 feet wide, so as to carry about 15 tons, or 150 barrels of flour. Under these considerations, and from being informed by Joseph Ellicott, last summer, when in Baltimore, that wide Canals were, *of late*, very much exploded in England, the reasons appear to be strong, for believing, that a water line of 24 feet, more than three times the width of the boat, would be sufficiently wide for the canal in question. With the usual slope of 18 inches base on both sides, to one foot rise, the bottom would then be 12 feet, and 8 cubic yards the excavation required for every yard in length.

46. In favour of the size thus adopted, it may be observed that it nearly corresponds with the size of the James River Canal which, agreeably to the information of Isaac Briggs, who assisted in its location, is to be 30 feet at the surface, 21 in the bottom and 3 deep, being an excavation of 8 cubic yards and a half in every yard of distance; and nearly agreeing also in size with 30 feet water line, 20 in the bottom, and 3 deep, as reported for the Potomac Canal, being an excavation, for every yard in length, of eight cubic yards and one third. I have been induced to

propose 4 feet for the depth, instead of 3, because the Canal would be less liable to be choaked by a collection of sediment, and would remain open for use a much greater length of time without being cleaned. Under these considerations, I have become entirely convinced that an abundance of useful economy may be applied to the opening of Canals, and having selected the size, that after the most mature reflection has appeared to me to be the most eligible for a boat navigation, the further calculations in relation to the required expenditure, will be made the subject of my next number.

WILLIAM KENWORTHY.

AGRICULTURE.

AN ADDRESS

DELIVERED BEFORE THE MASSACHUSETTS AGRICULTURAL SOCIETY AT THE BRIGHTON CATTLE SHOW, OCT. 9, 1822. BY THE HON. TIMOTHY PICKERING.

(Concluded from page 99.)

In respect to Live Stock, it is gratifying to see the spirit excited within the last five or six years, to attend to their melioration, by preserving some of the most promising for breeders, instead of sending them to the shambles; and by introducing from other countries some individuals already highly improved. New England was originally granted to merchants of Plymouth, in the county of Devon, in England. It is natural to suppose that some of the early settlers sailed from Plymouth, and brought with them the Devon breed of cattle. The uniform red colour of various shades, some deep red, and approaching to brown, now so commonly seen among us, are probably descendants from the Devon race originally imported. Their uniform red colour corresponds with a distinguishing mark of the Devon breed, now so highly improved and celebrated in England. Among our own, individuals of this stock might be selected, admitting, with equal care, of equal improvements, on the principles now so well understood by the eminent English breeders, who, Mr. Arthur Young has said, are indebted for them to the celebrated Robert Bakewell. On the same principles all our other domestic animals may be improved. And this course appears to me indispensable for the speedy attainment of extensive improvements of our stock, of neat cattle especially. More than one generation must pass away before highly improved races, from the few imported animals, can be generally obtained. In this important work every substantial farmer in the country ought to engage; and by their rival efforts in every county, the great object might be accomplished. Beauty of form is desirable, and will merit attention: but strength for labour and ample supplies for the dairy are more important. A disposition to *fatten at an early age*—a point of excellence zealously sought for in England, where husbandry labors are chiefly performed by horses, is not of material consequence to New England farmers, where oxen for the draught and cows for the dairy constitute their most interesting stock. But what shall farmers, who live remote from a veal-market, do with their surplus calves, above the numbers of the best selected to keep up their stocks, and to supply those whose situation may induce them to purchase, and not breed for themselves?—I will mention what was some years since stated to me as the practice of a respectable farmer in Connecticut. He had cows for a large dairy, and cheese making was his object. He allowed his supernumerary calves to suck their dam three days, (or until the milk was fit for the dairy) and then killed them; taking off their skins, and giving their flesh to his store-hogs. This was to me a singular instance of practice; but from the good sense of that farmer, I conclude he must have experienced it to be not merely a necessary but a saving practice. It may be in use among other great dairy farmers, although I do not know that it is.

The Trustees have already offered a premium to encourage the making of Fine Butter. But I am inclined to think it will be difficult, if not impracticable, to make any of the greatest excellence during summer, without the aid of ice-houses or spring-houses. The city of Philadelphia is admitted, I believe, to be supplied with *some* butter, during the warm months, superior to what is found in other cities of the United States. Yet their pastures are not better than those in the vicinity of some other cities and towns. I ascribe this superiority exclusively to the spring houses on many of the farms in the neighbourhood of Philadelphia. Pennsylvania is a well watered country. There it seems to have been an early practice, in taking up land for a farm, to search for a spring; and as near to it as the ground would permit, regardless of its situation in respect to the public road—to erect the dwelling house. Here the cattle,, as well as the family, would at once find good water, without the labor of digging a well. Over these springs small houses are erected usually of stone. The room of the spring-house may be from ten to twenty feet square, according to the quantity of milk to be provided for. Trenches are made on the four sides of the floor, and bottomed and lined with flat stones. The residue of the floor is likewise paved with stones. The water from the spring enters at the side of one trench, runs all round, and at the opposite side passes away at a hole left in the wall. The under side of the hole is at such a heigh above the bottom of the trenches, as to raise the water just enough to keep the milk cool in the pans which are placed in it. This water runs perpetually from its source, and as constantly passes off at the outlet. In one of the trenches are also set the cream pots, and the pots with the butter the night before it is carried to market. Perhaps in the vicinity of Boston and other towns in the State, there may be some springs which may furnish the same accommodations.

Much has been said and written concerning an evil which pervades our whole country, from one extreme of the union to another—the general use of spirituous liquors—prevailing, in the opinion of wise and good men, to a mischievous excess. Sometimes it has been hoped that Agricultural Societies might find means to check the pernicious practice. But the class of farmers who abstain from it must be too numerous to become candidates for premiums on temperance. Besides, such prudent men need no remuneration for their abstinence. Here virtue is indeed its own reward.

It is said that in France and Spain the laborers in husbandry are remarkable for their temperance: but they drink small wines instead of ardent spirits. A French gentleman who for some years was endeavouring to establish vineyards in the Middle States, particularly in Pennsylvania, once mentioned to me how cheaply the French peasantry could be regaled with wine, purchasing a bottle for a few pence. At the same time, in answer to my question, he admitted that such wine was not equal to good American bottled cider. It has occurred to me that nothing might be so likely to check, and in a good degree to supersede the general and excessive use of ardent spirits, as the universal introduction of

Good Cider.

Were this beverage as well made, as easily it might be, it would be alike palatable and wholesome; and in the end might banish spirituous liquors from the houses of the great body of our citizens. Good cider might be furnished at half the expense of strong malt liquors; provided apple orchards were more extensively cultivated, and the fruits intended for cider, properly selected. We have a great deal of bad cider, because sound and unsound apples are ground together, and no regard is paid to fermentation, except to give it vent. No one can suppose the juice of rotten apples capable of becoming cider. But in whatever degree they are introduced, in the same degree the liquor must be debased. To make the finest cider, sound apples only should be used. But I must not enter into the minute particulars of the process of making and managing cider—it would not comport with the occasion, nor be practicable within the limits to which this discourse must be confined. I will barely suggest a few things which involve some principles.

In every orchard are found a great variety of apples generally used for cider. In New England I presume these are chiefly wild, that is, ungrafted fruit. And I have heard the opinion expressed, that such wild fruit would make the best cider. This surely is an error. For although in a large orchard some good natural fruits may be found, yet many of the trees produce apples so small as to cost too much labour to collect them, and others have juices so meagre as when collected to be of little worth. A few sorts which in England have been celebrated for yielding the finest ciders, were always grafted with as much attention as apples designed for the table are with us. But in England, the apples which a century ago furnished ciders of distinguished excellence,—to use the expressive words, in like case, of some of our own farmers *have run out.* They can no longer be continued by grafting. This well known fact in that country, has led an eminent naturalist there to advance the novel doctrine—doubtless as true as novel—that trees, like animals, have their infancy, youth, maturity and old age. Grafts from the last, though inserted in young stocks, soon perish. Hence the farmers there have been seeking for fine cider fruits from new trees growing from the seeds; and when any of these are found to possess the desired qualities, they are propagated and extended by grafting.

In some parts of New Jersey, in which ciders of superior excellence are made, the farmers produce them wholly by grafting: nor can we expect fully to rival them, until we adopt the same practice.

Perhaps there are few extensive natural orchards in Massachusetts in which valuable cider fruits may not be found, with rich yellow flesh, capable of yielding liquors strong and of excellent flavour. From such trees, if still young, or in vigorous life, whole orchards might soon be formed. And probably different kinds might be selected which ripen their fruits at the times most proper for making them into cider. Apples until mellow do not attain their highest flavor; and till then cannot give the highest flavor to cider. Many reach that mellow-ripe state in October and November, which may be called the cider-making months in Massachusetts. It would require but little attention to select and propagate the best apples thus ripening in succession. Such ciders, made of ripe and unmixed fruits, would be more easily managed in the most difficult and important part of the process of cider-making—its first fermentation: on the right or wrong conducting of which the character of the cider depends. In one case it will be soft and pleasant—In the other hard and austere.

The Trustees of this Society have, I believe for several years, been offering a liberal premium to encourage the

Turning in of Green Crops, as a mode of manuring land: but I do not recollect that the premium has been claimed. It has been an ancient practice in other countries; and is not unknown in our own country. Dr. Eliot (whom I have already had occasion to mention) noticed it seventy years ago, in his Essays on Field Husbandry; and recommended millet as a plant well adapted to that purpose. The seed being but little bigger than cabbage seed, a small quantity will be sufficient for an acre. I have often heard of the turning in of green crops being occasionally practised in Pennsylvania. Many years since, an intelligent man of that state mentioned to me a farmer, who had purchased a farm in a township remarkable for the general poverty of the soil; and that he improved his own by ploughing in green crops—buckwheat, oats, rye;—turning them in repeatedly, until the land produced crops worth harvesting. Sir John Sinclair, in his Code of Agriculture, speaks of the practice of ploughing in buckwheat and other crops, when manure was deficient. But he says that in Lincolnshire, buckwheat had for several years been ploughed in as a manure, and ultimately given up as doing no good. He then adds—"Unless so far as nourished by the atmosphere, the vegetables thus treated are supposed merely to restore the nourishment obtained from the soil." And this is the very principle on which the ploughing in of green crops materially depends. The plants while growing derive a portion of their food from the air; and being turned in, so far at least add manure to the soil. But this is not all the benefit: weeds spring up with the sown green crops, and are sown in with them; thus increasing the manure, and at the same time cleaning the ground for a harvest crop. But besides the growing plants, the soil itself, under their shade, made light by the ploughing and harrowing, is also receiving a portion of the same fertilizing airs. Lord Kames, however, in his Gentleman Farmer, says—"I approve not of ploughing down buck-wheat, red clover, or any other crop, for manure. The best way of converting a crop into manure is, to pass it through the body of an animal. The dung and urine, not to mention the profit of feeding, will enrich the ground more than to plough down the crop." Notwithstanding these authorities—and the opinion of Lord Kames is entitled to very great respect.—I am inclined to think that the circumstances and condition of many farms may be such as to render the practice eligible; particularly when manure is deficient;—and where is it not deficient? Is it not a received fact, when lands have been impoverished by cropping without manuring, that by letting them lie a few years *at rest*, they acquire such a degree of fertility as to bear a crop of some sort that rewards the farmer's toil? If this happen to unseeded land, thrown out as waste, how much sooner may it be recovered when sown with buck-wheat, oats, rye or millet, and the crops when in full blossom ploughed in? If this product be small, let the land be again sown, and a second crop be ploughed in. And if a third sowing and ploughing in were given, what would be the whole expense? A trifle compared with a dressing with stable or barn yard manure—if it could be procured. This is to be carted to the field and spread, in order to be ploughed in: but the green crop is on the ground, and evenly spread, ready for the operation of the plough. But leaving all theoretical reasoning, I will recur to well authenticated facts.

The late distinguished agricultural writer, Arthur Young, Secretary to the English Board of Agriculture, so lately as the year 1811, delivered before that body an interesting lecture, to describe the husbandry and speak the praises of three celebrated British farmers. One of these was Mr. Ducket, who occupied in succession, two "sand farms;" that is, farms in whose soil sand was predominant. It was one of the practices of this very ingenious farmer, to plough in green crops to enrich his land. And to do it effectually, he contrived a plough with which, when drawn by four horses, he could open his furrows to the depth of eight or ten inches, and in them perfectly bury his green crops. The opening of so deep a furrow was called *trench ploughing*; and by the simple addition of an arm partly curved, and fixed on the right side of the coulter, at the desired height of eight or ten inches above the sole or bottom of the share, the growing crop was pressed to the ground; and the furrow-slice raised by the plough, following close behind and turned completely over, perfectly buried the crop and weeds. This coulter of Ducket's trench plough, with the curved arm attached to it, is called a *skim-coulter*. The arm must necessarily extend so far to the right as the breadth of the furrow; and just at that extreme, I conceive, the curve downward begins, so as, when the growing crop is pressed flat, the stems or straws may not spread out any further; and being thus confined, are completely overwhelmed. Hence there would be no vegetation in the seams of the furrows. "By means of this tool (says Mr. Young) I have repeatedly seen on his farm, stubbles completely turned down, and crops of turnips, tares and other plants instantly put in; which crops I have afterwards viewed with equal pleasure and surprise; the execution was as complete as the design was sagacious: but it went further—converting the nuisance of any weeds into manure. So effective was the work of the plough, that I once saw him turn down a crop of rye six feet high, and immediatly roll in turnip seed. The effect did not depend so much on an extraordinary depth of ploughing, as on the subversion of the soil; for of the rye I have just alluded to, not an atom was left visible; and yet the depth did not exceed eight inches. But if there be Couch (twitch grass) in the soil, this ploughing is ten inches deep; and the succeeding crop in any case well hand-hoed. This trench-ploughing system is not practised above once in two or three years, and the successive tillage shallow, upon the surface. By such deep ploughing, seldom given, Mr. Ducket conceived that a due degree of moisture was preserved in his light land; by means of which his crops were flourishing in seasons of drought which destroyed those of his neighbours."

Here perhaps the question will occur—were Mr. Ducket's improvements adopted by other farmers? Mr. Young says they were, by some of his enlightened brethren. Why they were not generally imitated, Mr. Young ascribes (I repeat his words) to "the perversity which characterizes the ignorance of English farmers." Again he says, "If our farmers would have adopted the practices really excellent, as soon as they were known, British agriculture would forty years ago have arrived at its present state; and at this time the kingdom would have been a garden."

In connexion with this account of Mr. Ducket's practice, I take leave to suggest the necessity, or at least the great utility, of an occasional fallowing; primarily, in order to destroy the weeds which infest so many fields, and essentially injure all crops of small grain, especially spring wheat, which ripening more slowly than rye and barley, is much more oppressed by the weeds. In effecting the object here suggested, and to enrich the soil while making a fallow, I would recommend the following mode of practice. As soon as it can be done in the spring, plough, sow and harrow in the seed of the crop intended to be turned in. Weeds will spring and grow with the crop.—When the latter is in full blossom, turn it in, immediately sow for a second crop. With this also will arise another crop of weeds; and both, as before, are to be turned in. Should the season permit, and the foulness of the ground require it, sow for a third crop, to be ploughed in, like the former, before winter. A field thus managed will be in good order for a crop of barley, summer wheat, rye or oats, in the ensuing spring; and of either a comparatively clean crop may be expected.

This dressing with green crops, valuable as I conceive it to be, need not be confined to sand farms; it will be not less beneficial in all light gravelly loams, which I suppose rather to abound in Massachusetts; certainly, stiff clayey loams are not common.

A few concise remarks on the general principle, and on some of the objects of these annual exhibitions, will conclude this address.

It is supposed, and justly, that these public shows, by exciting an emulation among farmers, will lead to important improvements in our husbandry. The general question which the case presents, is, what will be the easiest, cheapest, and most effectual means to accomplish this great object? A principal one has been to grant premiums for the greatest crops of specified plants on given quantities of land. One pleasing result has appeared—that by ample manuring and good culture, the usual crops of the same plants may be doubled and trebled. But is it necessary to continue premiums of this kind? May not now the management of farms rather claim attention? Instead of numerous small premiums dispersed on a variety of objects, might they not be advantageously concentrated for the purpose here intimated—the cleanest, most economical, the most productive management of farms? *For it must be such a general improvement of the entire farm that will constitute the farmer's permanent prosperity.* The decision of claims on this ground cannot be expected to be made by a committee of this Society to travel through the whole state: but will it not be practicable by county committees? Perhaps it may not be difficult for the Trustees of the State Society to prescribe some general principles and rules of proceeding, that may produce uniformity in the reports of county committees acting under their direction.

In ploughing, the just aim must be to make straight furrows, and of a uniform breadth and depth; and so turn over the furrow-slice as completely to cover whatever plants or manure are upon it. All this cannot be effected with a *hurried* step. And what benefit can possibly result from such a step? A farmer's oxen at the plough must labour a great part of the day properly to turn over an acre. To do this without a driver, will require a skilful ploughman and well trained oxen. To encourage the forming of such ploughmen and oxen, should, I conceive, be the sole object of ploughing matches. Working-oxen at the plough, may be considered as well trained when they obey the voice of the ploughman, keep the track in which they ought to move, and step as quick as will be compatible with the necessary continuance of their labour. And as the annual exhibitions at this place have demonstrated the practicability of performing the *general* operations of the plough with one yoke of oxen, without a driver, it may merit consideration whether premiums should not be thus limited in all future trials with the plough. Under such limitations, every farmer who is ambitious to exhibit proofs of superiority in these points, would be sensible that his oxen must attain a certain size, and be, though not fat, yet well fleshed; which would give strength to their sinews and momentum to their exertions. With such oxen all our agricultural labours would be so well performed, that there would be no room to envy the condition of farmers in any of our sister states; in some of which, their horses consume perhaps as much grain as would furnish bread to all the inhabitants of New-England.

TO THE EDITOR OF THE AMERICAN FARMER.

OLD WHEAT RECOMMENDED FOR SEED.

Dear Sir,

In page 220 of your 4th volume, I find the use of old wheat for seed, recommended in preference to new seed, as a preventive against the smut and mildew. It would appear from the letter of Mr. Pitter, extracted from the London Farmer's Journal, that the use of old wheat for seed is very common in England; a practice, probably, introduced by the frequent failure of their crops. In this country, I believe, the use of new wheat is universal. Since the receipt of the information of the general destruction of our wheat crops, from every quarter of our country. I have searched many agricultural works of high authority, for information on this very interesting subject, without having met with a line throwing any light upon it. It is a consoling reflection, that there is in many parts of the United States, an abundant supply of wheat of the last year, of a good quality, to supply the deficiency of seed from the crop of the present season—and I have no doubt but a reference to the letter above alluded to, will satisfy any person as to the safety of depending on it, in preference to new wheat of an inferior quality. If doubts should exist in the minds of any of our practical farmers, I should like to see their reasons against the use of old wheat. It is now the proper time for inquiry into the merits of the question, previous to the seeding time of the approaching autumn.

Respectfully, your friend,
W. C.

June 6, 1823.

TO THE EDITOR OF THE AMERICAN FARMER.

LANDLORD AND TENANT.

——————" Ye landlords, then,
Be mindful of the rough laborious hands
That sinks you oft in elegance and ease;
Be mindful of those limbs in russet clad,
Whose toil to your's is warmth, and graceful pride;
And oh! be mindful of that sparing board
Which covers your's with luxury profuse,
Makes your glass sparkle, and your sense rejoice!
Nor cruelly demand what the deep rains,
And all-involving winds have swept away.—"

From every observation I have been able to make, during a period of several years, it appears to me that there is something wrong in the usual mode of letting lands, as we see that tenants are continually removing from one farm to another as a matter of course, and appear nearly as devoid of local attachment, as the wandering Arabs. I am aware there are some exceptions, but I think there are very few instances to be met with of a tenant who has lived for a number of years under the same landlord. It will, perhaps, be said, lands are so low priced that tenants soon acquire sufficient money to purchase a farm; but I by no means agree with this opinion, as I have seldom met with these fortunate tenants—indeed, on a careful examination, I think it will be found, that the language used by the House of Commons to Horne Tooke, is nearly applicable as respects tenants—namely—"Once Parson, always Parson."

If on enquiry, it should be found, that there is not that cordiality between landlords and tenants, as there ought to be; and that this uneasiness of tenants arises principally from this cause, it would be well if the evil was enquired into, and if a remedy could be found for the same, it would be still better, as few people are aware of the vast loss that is sustained by the community, and how much the cause of agriculture is injured by this restlessness of tenants; indeed it may be safely affirmed, that no estate can improve under such circumstances; and we meet with but few estates that do not require improvement—but I fear landholders are in general more intent on present profit, than permanent improvement—and this kind of economy is the principal cause why so many estates appear so wretchedly managed in the southern states—indeed, so long as we hear men of influence undertaking to point out the advantages of doing without internal fences, and others preferring a poor dead one, to a living thorn fence, and some cultivating lands without comfortable buildings, and acting as though they were unnecessary, whilst almost every one has taken up the idea, that it is better to suffer vegetation of every description to be dried up by the atmosphere, *and carry pestilence in every direction*, rather than to consume it by stock; and some gravely asserting, that the grazing of sheep, has nearly ruined both England and Spain; and others letting out their estates in a manner that must entirely destroy them, and bring ruin on the tenants; and forgetting that the interest of both parties is in almost every instance the same—when we see this, Mr. Editor, we need not wonder at the wretched appearance of almost all large landed estates. It, perhaps, will be said that in a general way, tenants cannot be found who are worthy of generous and honourable indulgences; but the answer is obvious—let landlords set the example, and tenants will find it their *interest*, as well as their duty to follow it.

In order that the subject of landlords and tenants may be better understood, I beg leave to call the attention of some of your readers to it; and to suggest, that it would be well if all the various modes of letting lands, were more generally known, and with the view of obtaining this information, I should be glad if some of your readers, in different parts of the Union, would communicate to you, such information on this subject as they possess, and particularly the kind, and situation of the land they speak of, the rent; and whether in money or on shares, and if the latter, what proportion of the produce, and whether every production of the farm is included—whether the landlord finds any part of the labour or stock; or makes any part of the improvements, and whether leases are given for a number of years—or any other inducements held out to encourage tenants to improve their farms?

ALBION.

FROM THE SOUTHERN PATRIOT.

INLAND SWAMPS.

Mr. Editor—I am happy to find that a writer, ander the signature of "Rusticus," has called the attention of the public to the neglected and abandoned state of the Inland Swamps. I agree fully with that writer, that there are many advantages attending the culture of those lands, which make them extremely valuable, and I do not hesitate to express the belief, that were they put in any thing like the order, that is absolutely necessary to make the Tide Lands productive; they would be restored to their former rank in the agricultural community. For that they were once in high estimation, there is abundance of proof. As rice has risen, in consequence of the late advices from Europe, I think it fit time for the proprietors of those lands, to take suitable steps to restore them to their former culture, but before any thing effectual is done, prudence suggests the propriety as a preliminary step, that accurate surveys should be taken, that proper estimates of the probable costs should be made, and that the work should be conducted in such a manner, as that no irregularity nor distraction of councils should impede its progress.

The legal powers granted to the Commissioners on some of the Swamps, are fully sufficient for this purpose, and nothing but the most extraordinary apathy, can account for their reluctance, in coming forward to perform the duty, which they owe to themselves, to their posterity, and to their country. And here, Mr. Editor, let me deplore the careless and neglected condition of agriculture generally in these lower districts. At a time when every effort is making in our sister states, to advance the cause of enlightened agriculture, and to realize the expression of the Poet—"O nimium fortunatos sua si bona norint, agricolas;" it is our lot, with few exceptions, to witness its decline; and to find that instead of progressing from year to year, that we are gradually receding; for rural concerns, so far from being considered as of the highest importance and the most desirable employment, are in most cases looked upon as the surest road to ruin. "It is a lamentable fact," observes that departed patriot, Gen. Davie, "that the generality of our citizens cultivate their lands as if they were but tenants at will; as if there was a general presentiment that we were all sooner or later destined to join in the current of Western emigration—and upon our present wretched system of agriculture, this presentiment is not ill founded. Apathy, or an ill directed avarice; looking only to the advantages of the present moment, may operate as decisively as the mandate of a despot to banish us from our country." What is this system that is so emphatically pronounced *wretched?* Why, it is the constant succession of exhausting crops, such as cotton and corn, without any intervals of rest, or the use of any meliorating process, and is as applicable to one part of the country as to the other. If then we pursue the land killing system, as it has been justly called, until every principle of fertility is destroyed, and the country puts on an appearance most dreary and desolate, is our condition without hope? Who can we censure but ourselves?

But is there no remedy? and if there is, what is that remedy? Why, either to restore the exhausted lands, by judicious management, which must necessarily be the work of time, or introduce the culture of rice into those fields whose fertility is such that in spite of mismanagement they will remain permanently productive.—Can we look on with calmness, and behold our fellow citizens, year after year, quitting their native land? Can we contemplate, without emotions of sorrow the sad reverses of fortune, which are hourly exhibiting themselves? That we may love our country (says Burke) it should be lovely, but how can we continue to love that country that fills us with so many bitter recollections of the past, sad contrasts of the present, and gloomy anticipations of the future. But are we to sink in despondency and despair? Certainly not: patriotism bids us make every generous effort to restore it to its loveliness; duty calls on us to shake off that fatal apathy which now enthrals us, and which if it is longer indulged may banish us forever. If then by suitable efforts we can turn the tide of emigration from the Western country, and induce our fellow citizens, of the Upper Districts, who may be inclined to leave their homes, to bring their industry, skill and capital to be exerted in this favored portion of the State, we may hope to see a return of the former state of things; and after a long night of sorrow and suffering, joy may come at length in the morning.

Can any thing be more strange and inconsistent than that we should be lavishing treasures to facilitate our intercourse with districts beyond the mountains, whilst we are neglecting the mines of wealth which we have at home; not that I wish to be understood as disapproving the policy of facilitating commerce with the other States, by establishing good roads, canals, and so forth; but at the same time that we attend to the one, let us not neglect the other. I have now trespassed upon your patience long enough, I shall therefore conclude, by observing, that in a future number I will introduce the report of an able Engineer, after a survey made, at the request of the proprietors of one of those swamps.

PHILO-RUSTICUS.

Massachusetts Society for Promoting Agriculture.

At the annual meeting of this Society, the 11th inst. Aaron Dexter, Esq. the President, (and who has sustained various offices in the Society for tkirty years) and Samuel W. Pomeroy, Esq. the 1st Vice President, declining a re-election, John Lowell, Esq. was elected *President*; Hon. Thomas L. Winthrop, *1st Vice President*; Hon. Israel Thorndike, *2d V. P.*; John Prince, Esq. *Treasurer*; Hon. Richard Sullivan, *Corresponding Secretary*; Gorham Parsons, Esq. *Recording Secretary*; Benj. Guild, Esq. *Ass. Rec. Sec.*; and Aaron Dexter, Esq. Hon. Peter C. Brooks, Hon. Josiah Quincy, Samuel Perkins, Esq. Hon. John Welles, and E. H. Derby, Esq. *Trustees.*

PRESERVATION OF GRAIN, &c. FROM MICE.

Mr. Macdonald, of Scalpa, in the Hebrides, having some years ago, suffered considerably by mice, put at the bottom, near the centre, and at the top of each stack, or mow, as it was raised, three or four stalks of wild mint, with the leaves on, gathered near a brook in a neighbouring field, and never after had any of his grain consumed. He then tried the same experiment with his cheese and other articles kept in store, and often injured by mice; and with equal effect, by laying a few leaves, green or dry, on the articles to be preserved.—[*Philos. Magazine.*

USURY LAWS.

No acts of legislation can have a more immediate and general bearing on the concerns and interests of civilized society, than those which are instituted to control and regulate the *uses of money*, by private individuals; and it is truly wonderful, that such remnants of barbarous and less enlightened periods, should have been allowed to remain until this day, on the statute books of a country which has, in so many respects, risen above the prejudices engendered in darker times. The abolition of usury laws, one would suppose, would as naturally follow after the establishment of the great principles of free government, asserted in the declaration of independence, as has the abolition of church establishments, and other "odious monopolies." The prosecution of internal commerce, the pursuit of pleasure and of business of every kind, necessarily keeps half the community in a continual state of locomotion—vehicles of all kinds, from the majestic steam ship to the Jersey wagon, are indispensable as the means of intercourse between different parts of the community: Why then might we not limit the price of travelling *per mile*, with the same vexatious minuteness of regulation, as we undertake to prescribe the *terms* on which every individual shall loan his money? Why not say that a man shall charge but so much per day for the hire of his horse, as to prescribe the precise sum he should receive for the loan of the money for a given time, for which he bought the horse?—suppose I buy with one hundred dollars, one hundred barrels of flour—why should not the legislature, which in its officiousness, prohibits my lending the hundred dollars to my neighbour for a greater consideration than at the rate of six dollars per annum, also interpose and establish the exact advance at which I may let him have my flour? It may be said, that the one transaction is more specific in its nature and materials, more easily subjected to legal restraint, and less liable to evasion than the other: the fact is not so, and if so, the argument drawn from it is of no avail. The value of money is as liable to fluctuation, as that of other commodities—under certain circumstances, and such as often occur, it may promote my interest to lend it at five per cent—under others, it may be highly advantageous to me to borrow at ten—it may often afford the means not only of gain, to the lender and borrower, but of the salvation of the family of the latter. It is a matter which should be left like all other dealings, *to regulate itself.* Being so left, it will soon find its proper level—rising and falling according to the demand and the means of supply, and the securities offered—governed, in short, by numberless considerations and circumstances, which, as they cannot be foreseen or controlled, no legislature should make any specific regulation on the subject—neither should bodies of men be *incorporated* with *exclusive privileges* to lend. Such incorporations are contrary to the spirit of the age, and of the great improvements, in the science of government, which have been *put in practice* in this country.

It would not be saying too much, to aver, that Girard's bank in Philadelphia, is the only legitimate bank in America! why do the notes of his bank circulate at par?—because the publick have confidence in his prudence, and the solidity of his capital—Why does he not invoke the legislature to invest him with *chartered privileges*?—because he already enjoys all that should be granted, free access to judicial tribunals, and the impartial protection of the law in common with other citizens.

As we marvel at the *continuation* of absurd usury laws, and religious tests, so we know not in the country a statesman, on whom we should sooner have relied, to expose and denounce them, than Gov. Robertson; for we have always admired the originality and soundness of his publick views and character. In Congress, he was amongst the first to expunge error, and reform abuse—he was always ready to co-operate in whatever measures were calculated to purify and embellish our political institutions, and to make them more conformable with the spirit of this enlightened age; we have been accustomed to regard him as an eminent and fearless statesman—inflexible in the cause of truth and free principles, and among the very last to become the slave of power or prejudice.

But why introduce the discussion of laws to regulate the interest of money, into the American Farmer?—Because, without any connexion with party politics, it is the concern of every day, and of every body—we could show, if we had room for further reflection, how properly it concerns the Farmers—how by the operation of usury laws and banks, the means of lending have been engrossed by a few—how the facilities of borrowing on landed security, have been destroyed—how the *few* have grown enormously wealthy, while the *many* have been ruined.

All that is necessary or proper is, that the legislature should establish some rate of interest, whereby to adjust cases where no particular rate has been agreed upon by the parties.

Edit. Am. Far.

FROM NILES' WEEKLY REGISTER.

INTEREST ON MONEY—OR USURY.

It appears that the legislature of Louisiana, at the late session, passed a bill to prevent usury, or limit the amount of interest that might be legally recovered on money. The governor rejected the bill for the reasons stated below. In the senate, it was resolved to pass it, notwithstanding his objections, 14 to 2, but in the house of representatives, there were 25 for the bill and 11 against it. The whole number of members elected to this branch of the legislature is 48, and of these two-thirds must agree to set aside the governor's *veto.* and though more than two-thirds of those present were in favour of it, the veto had its designed effect.

Governor Robertson's objections to the Usury Bill.

TO THE SENATE.

I have given to the act entitled "an act to prevent usury and for other purposes," all the consideration which the very short time it has been before me, would allow me to bestow on it; and for the purpose of enabling the legislature again to act on it, previous to their adjournment, return it with the following objections:

It belongs to a class of laws which I do not approve, to a kind of legislation, in the propriety of which I cannot concur.

Religion, the press, the price of labor, of articles of commerce, have all, from time to time, been subject to the regulations of government—one, by one, however, they have been reluctantly freed from restraint, and the great truth generally acknowledged, that mankind, when left to themselves, are better judges than their rulers, of what best promotes their happiness and interests.

Too much interference in the affairs of individuals has been attended with the worst effects. Despotic governments manage every thing: all wisdom, virtue, talent, is with those in power. The people, in their estimation, are ignorant, unworthy of confidence, unfit to be trusted even with their own concerns; others very kindly save them the trouble of acting or thinking for themselves, and make them pay usurious interest, indeed, for the care they take of their property, their body, and their souls. Free governments leave indviduals, as much as possible, to themselves; indeed freedom of action and freedom of contract, abstaining always from injuring others by force or fraud, is the very definition of personal liberty—or that liberty which it is the duty of governments to respect. The citizens of our republic are not minors in a state of pupilage; they have not constituted their public servants their masters and guardians; they are not so modest as to deem themselves incompetent to attend to their own business, and they know very well that agents and managers do not take better views than their principals of transactions on which their property depends.

The act under consideration does not appear to me to have been demanded by the community—that part of our society in this city, whose interests are particularly concerned, and whose opinions deserve great weight, object to the measure as mischievous in its tendency. To the citizens of the country it is probably as unwelcome as unexpected. During the last summer and fall I travelled over the greater portion of the state; I heard complaints of the want of an organised militia—of the situation of the public lands—of the defenceless state of the marine frontier,—I heard nothing said of usury. If the evil exists, it is brought on individuals voluntarily, and mankind ordinarily are ashamed of denouncing their own follies, or whining over their own grievances.

That there is want of money, I am not disposed to deny; but that it can be made by legislation more abundant and cheap, I cannot admit. It is not wonderful that there should be a scarcity of specie, and, of course, any valuable representative of it, when we reflect on the falling off of the produce of the state, both as it respects quantity and price—on the need and occasion for funds always felt by an enterprising, flourishing and industrious people—on the exportation from the United States in the last eighteen months, of upwards of $7,000,000. In Boston alone, in a few months, nearly $2,000,000 were taken out of the accustomed range of its circulation—the pressure was great indeed, but that intelligent people resorted to no unusual expedients, neither to usury laws, nor stop laws, nor an increase of banks, and consequent inundation of paper—they knew very well that the movement of specie and its price were as independent of human ordinances as the currents of the ocean, which, ebbing and flowing, seek their level, regardless of the chains of a Xerxes, or the mandates of a Canute. No individual, no community, that has any thing of equal value to give for money, need be apprehensive of not obtaining it. It goes where it is wanted, and can be purchased with more certainty and more celerity than corn, cloth, or any article whatever—we as surely get money for produce, as produce for money—we as readily procure Spanish dollars for flour, cotton, &c. as in Spain they obtain these articles for their dollars: there is no danger of their being enabled to prevent their exportation—this experiment has been sufficiently tried in Spain, Portugal and other countries. Money escapes in spite of every effort to confine it—the attempt to do so is as futile as an effort to stop up the pores of the skin.

I am opposed for my part, to regulate the price of any thing—the bread of the baker, the meat of the butcher, the money of those who have it, is their own property, as much so as their house or goods—they have a perfect right to part with them or not on such terms, and on such alone, as they may chuse. Tolls at bridges, ferries, loans by chartered companies; these are privileges conferred by government, and of course subject to such conditions as government may impose; but the property of individuals, acquired by their skill and labor, stands on a widely different footing; its worth depends on the market price, a much better criterion of its value than any other by which it can be determined.

Such are the views of a general nature which have occurred to me, in the hasty examination of the act now under consideration; but I object to it more particularly because it holds out inducements to individuals of full age, in the complete possession of their understanding, to violate contracts aud promises which they have deliberately and voluntarily made; whereas the laws should never interfere but for the purpose of enforcing agreements fairly entered into.

The provision too may be considered nugatory; it exists already almost a dead letter in the codes of the several states in the union, and in that of our own—nothing can be more conclusive to prove how reprobated it is in its effects, than the fact of its being seldom or never resorted to. But as if it were not enough to enable the persons themselves, contracting with each other, to violate their pledged faith, strangers to the transaction are asked to intermeddle for the noble purpose of filling the coffers of colleges and schools, and their own pockets, with the money of others, although the party borrowing, and alone concerned, may have neither uttered a complaint, or have had reason to regret the loan he may have made—a business of bringing such suits would be among the most profitable and at the same time the most disreputable in which a man could engage.

The 3d section, from the oath which is required, takes for granted the probability of every creditor of an estate being an usurer—this is a suspicion which I would fain hope our constituents do not merit. It is the right at least of every man to be considered innocent until he is proved to be guilty.

At the commencement of the session I objected to the power now vested in the executive, of bestowing certain offices without the consent of the senate. I have seen no cause to change my opinion. The present act, in authorising the governor alone, to commission brokers, recognises that principle and adds to its evils. The same section punishes with imprisonment any person acting as a broker who shall not have been commissioned, or who shall have been deprived of his office.—Now, I agree with the author of a report on a plan of penal code for the state, "that no punishments greater than are necessary to effect the work of invention ought to be inflicted; that those which produce it, by uniting reformation with example, are best adapted to the end; that modes of punishment, inconsistent with the true maxims of penal law, have their advocates; that imprisonment, as a corrective, is nearly the worst that can be applied; that it is a school for vice and every species of corruption."

The gentleman must have had the jail of New Orleans in his eye; and will you send a broker there for acting a single hour without a commission, for three or twelve months? No, surely not! Let us reserve that sink of horror and iniquity for those by whom it is now filled: murderers, thieves, and, shall I proceed? unfortunate debtors.

The section which authorises criminal prosecutions against those who shall receive more than legal interest, and directs that the sentence of conviction shall be published in the newspapers of the city at the expense too of the individual thus prosecuted, is a mockery of human feelings, as inexcusable as the disregard of the rights of liberty manifested in the provision just before alluded to—is usury, though called a misdemeanor, to be considered as worse than the blackest crime? the murderer is not required to be the herald of his having violated the law of God; shall we attempt to place lower in degradation one who disregards the arbitrary enactment of his fellow man?

The multiplication of oaths which the law produces, cannot but be regretted by its warmest advocates; and the litigation to which it will necessarily give rise, will be felt as an evil greater and more certain than any it is intended to prevent.

The effects of the act on trade and commerce, and indeed on all the transactions of society, will be, I apprehend, in the highest degree unfavourable and ruinous. The 7th, 10th, 11th, and 12th sections are particularly objectionable; they have a tendency to embarrass all money and exchange negociations, by creating doubts, suspicions and difficulties, the bane of all commerce, and as yet happily unknown to this community. The money of the country will vanish from circulation when banks and capitalists find themselves shackled with vexatious and inconvenient regulations, unusual punishment and destructive litigation. The course of borrowing and lending is just such as circumstances, and those whose interests are concerned, have made it.

It necessarily, in all intelligent and prudent societies, takes the best possible directions; if not, laws will but increase the evil. Men of principle will not borrow in a manner ruinous to their interests; men of honour will not lend as extortioners; these form the great body of the community; their rights ought not to be trampled upon under the vain expectation of reforming the prodigal, or of infusing charity into the bosom of those who are strangers to benevolence and liberal feelings.

Objecting then, on principle, to many of the provisions of the act; believing, as I conscientiously do, that its effects will be injurious, as well to the morals as to the pecuniary interests of society, I feel myself reluctantly compelled to withhold from it my approval.

THOS. B. ROBERTSON.

New Orleans, March 24, 1823.

* * *

A report of the tobacco inspected at, and delivered from Pig Point Inspection Warehouse, during the quarter, commencing on the 7th day of January, and ending on the 7th day of April, eighteen hundred and twenty three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	10	10		10
Number delivered.	17			17

GASSAWAY PINDELL, Inspector,
Pig Point Warehouse.

TREASURY OFFICE, ANNAPOLIS, April 12, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

Editorial Correspondence.

Pequea, Lancaster county, Penn. June 12, 1823.

A greater prospect of a more luxuriant crop of wheat than we had the beginning of the present spring, has not been observed in this county for some years. "Then the toil-worn farmer could pleasantly stroll round his fields, and in reviewing them, could justly anticipate a full and rich reward at harvest time, for all his toil and hard earned labour;" but lo, a sad reverse—now, instead of viewing his fields with that delight and pleasure before experienced in passing them, his eyes are rather inclined to the ground, at his feet, pondering upon what method the weaver, blacksmith, shoemaker, tailor and wheel-wright should be paid—looking over his wheat field, he has no prospect of its coming out of it—for instead of wheat, there are cheat and numerous other weeds; the wheat standing fast, since about the first of May. That staple upon which all his hopes depended has vanished. Such has been the destruction of the Hessian Fly, that some fields will not produce as much as the seed sown, which in April promised an abundant crop; though happily, it is not so generally. Some fields will produce an abundant crop, while others adjoining, will not be worth cutting: upon the whole, we may anticipate a little better than half a crop of wheat. Rye is very good; cheat has not been observed in so great a quantity for a long time; in a short ride I made in this county a few days ago, I observed several fields, that, by enquiry, I understood were seeded with wheat last fall, and seemed to do very well until the shooting or heading: then, instead of wheat heads making their appearance, *cheat* sprang out; had it been wheat, it would have been a good crop; so uniform was the cheat, that by looking over the fields you would hardly believe there would be 100 heads of wheat in a ten acre field.

In this, I am willing to take the side of your correspondent, "Plain Sense," in opposition to S. V. S., though I should run the risk of being classed among the superstitious and credulous. A very great failure of pasturage, and mowing lands is experienced here this season, more so than for a great length of time. In consequence of the dry seasons, and hard winter, clover will not remain more than one year in the ground: why it is more apt to draw out during the winter now, than formerly, is a question that I should wish to have solved. Some attribute it to plaster of paris, but I think wrongfully. In Chester county, to take it in general, the clover is good and abundant; while in Lancaster county, on the very best land, there is none, comparatively speaking; if liming throws it in their favour, the farmers of this section of the country, are following their example; every farmer is anxious to get a lime-kiln built, and are in quite a spirit of liming; observing they have too long been putting their farms in their pockets.

In consequence of the failure of clover, there was a great quantity of millet sown by the farmers of the county, and much more would have been sown, could the seed have been obtained; it is as yet but little known among us. Corn for the week past appears to be at a stand, having had no rain for two weeks. The cut-worm has made some depredations, but not generally; it is a white-worm, called by some here, the white-grub, and appears to vie with the Hessian Fly in its depredations. It travels about half an inch under the surface of the ground, and destroys every thing in its course—corn, oats, rye, barley, timothy, clover, &c. all suffer by its keen appetite.

Respectfully your's,
E—— B——.

Bladensburgh, Md. 11th June, 1823.

"We are suffering thus early by a severe drought, accompanied by unusual cool weather, which gives the face of our country, the worst appearance I have ever witnessed, and renders the prospects of the agriculturist truly gloomy. I thank you for the fine sample of tobacco you sent me; it is better than we can raise on our highly manured lands; though the crop of the last year was much better than usual, more especially in the lower part of the county, where they never wanted rain to mature it early."

Talbot county, (Md.) June 16, 1823.

"While in Philadelphia, in May last, I got for an hour to Col. Powel's—and was very much gratified by a hasty walk with him over part of his beautiful grounds—his growing crop of mangel wurtzel, was in the finest order and most finished style of cultivation; but I doubt whether 17 inches depth of ploughing will suit any one, who does not reside next door neighbour to the Augean stables of a great city.

"When I left home the middle of May, the Hessian Fly, the small white worm in the bud, and the chinch-bug had been for ten days committing the most terrible ravages on our wheat crops. It has pleased Heaven measurably to stay these plagues. On the light lands the crops are done—on our best wheat lands in a few instances the crops will be full; the average of these last, generally will be from a half to two-thirds of a crop—the heads are of very good size, and the quality promises to be good. It would now be improved by two or three good showers. We are excessively dry, and without them the ripening will be too rapid for the perfection of the grain."

Nottoway county, Va. June 3, 1823.

"As it may be a matter of curiosity to know the prospect of crops in this part of Virginia, I am sorry to say that our wheat will fall far short of the average quantity. The Hessian Fly has been unusually formidable, and the chinch-bug has done us great injury. The spring with us has been uncommonly dry, which from my observation, is favourable to the progress of the latter insect, as I always observe them more numerous on thirsty spots. Some of my old neighbours inform me that when they made their appearance some forty years since, they were entirely destroyed by a wet season."

Gloucester county, Va. May 24, 1823.

"The crops of wheat and barley, in these low grounds, exhibit a very flattering appearance; but the Hessian Fly, as I am informed, has done considerable injury to the wheat fields of those gentlemen, who reside in the high lands. In consequence of the unusually cool nights which we lately had, our corn, after being planted, *stood badly*; multitudes of corn grubs cutting it down, almost as soon as it made its appearance. We have, therefore encountered a good deal of trouble in replanting and setting our corn.

Next fall I hope to be able to set out cuttings of the CHEROKEE ROSE, sufficient to afford me a long and handsome hedge. The vegetation of the rose, so politely transmitted to me by Mr. Rowand of Charleston, has been very active upon these low grounds, and I have no doubt, but the rose will prove to us a most desirable acquisition.

It is really a beautiful prospect to contemplate a luxuriant bush of this rose, in all the glory of full bloom It reminds me very much of the gay and gaudy drapery, which the Cornus Florida displays in the vernal season of the year. Nor is the corolla of the rose wanting, in resemblance to that of the ornamental "pride of our forests." With joyful anticipation, therefore, do I look forward to the period, when a large portion of my farm will be embellished and adorned with a hedge so beautiful and so useful."

Richmond, 16th June, 1823.

"Crops of wheat in Virginia, notwithstanding the ravages of the Fly, will be much better than was expected some weeks ago."

Hertford, N. C. June 14, 1823.

"I regret to say that the crops of wheat are very much injured in this county, but in the adjoining county of Pasquotank, I am informed they are *tolerably good.* The fly, the bug and the cold weather have all been against wheat. We had some frost here on Thursday morning last."

Duncansville, S. C. 24th May, 1823.

DEAR SIR,

Since sealing my letter this morning, I found from the enclosed from the National Intelligencer of the 10th inst. that I had forgot either to plant or send you some seed of the "Sword Bean," given me by Capt. Warley. I will plant in the morning—they require something to run on—will bear till frost—are said to be very productive; but I know not if any fair experiment has been made of their utility—the pods are often more than two feet long, and when young, are eaten by the negroes. But I never have heard of the trial as a vegetable for the table.

Your's, &c.

A bean pod from the south, (full of large beans,) which measured thirteen inches in length, and four in circumference, has been exhibited in Providence. It is in the shape of a Turkish sabre, of a yellowish hue, and beautifully seamed on both sides. This singular vegetable grew in Florida, and was sent to a gentleman in Providence, who will endeavour to propagate it. We presume this is the same kind of bean, upon the stalk of which the hero of the Nursery tale climbed to the moon.—*New York Com. Adver.*

Tuckersville, June 1, *Wayne county, Georgia.*

"As I believe it will please you, I will just add that I have one acre of *guinea Grass*, transplanted, and growing well. I have fed my horses with it since the 25th of May."

Ludlow Station, near Cincinnati, (Ohio,)
May 23, 1823.

I send you the description of a mode of breaking refractory horses, which a friend of mine saw practised in Texas—it may be beneficial. I know the information to be correct, as it came from an honourable man,

A pen was made 18 feet square, and a refractory vicious Spanish horse confined in it. The gentleman who undertook the management of the horse, Mr. B. of Tennessee, went into the aforesaid pen with a bunch of switches, and exercised them on the animal. He was at first very violent; but at length, to save himself, kept as near his castigator as possible; then the man would mount the fence, and make the horse come to him. He would afterwards descend and whip the horse round again and again, and make him come up to the fence, and then mount him. In this manner the violence of the outrageous animal was subdued, and made tractable and gentle in less than two hours.

Fort Osage, (Missouri.) April 8, 1823.

"I am, at this moment, experimenting in my nursery.—I have grafted apples on sycamore and cotton tree stocks, close to the root. I am told that the most flourishing and surest orchards, of apples in the west, are growing on sycamore roots. I am trying peaches on the wild plum, and shall, by recommendation of one of my neighbours, graft some peaches on stocks of the common black walnut. This neighbour of mine assures me, that he has seen a very *old* and flourishing peach tree, growing on a walnut—it is easy to try it; and should it succeed, perhaps we may be able to obtain durable peach trees—at least, we shall escape the annoyance of the worm. I am determined to try all manner of ways to procure a good permanent peach orchard. The result of such of my experiments as prove successful, shall be made known to you in due time.

TO THE EDITOR OF THE AMERICAN FARMER.

HOW TO PRESERVE PICKLES.

Dear Sir,

Observing in your paper of the 23d ult. an article on the subject of "*reclaiming frozen pickles*," reminds me of the manner my wife *preserves* them; by which means, let them be frozen ever so hard, they are not in the least injured, but are as hard, green, and bright at this moment as in the fall.

To twelve quarts of *boiling* water, put a pint of salt; as soon as it is dissolved, put in the cucumbers, peppers, or any other vegetable you wish to preserve, and set the vessel near the fire, so as to keep them blood warm. Change this brine every other day, during fourteen days, and keep it covered with fresh cabbage leaves. At the end of this time, take them from the brine, put them into the vessel in which you mean to preserve them, and pour on them boiling vinegar, to cure them. Be careful to stir them occasionally to prevent a scum rising on the top.

AGRICOLA.

Pittsfield, (Ms.) June, 1823.

On the 2d inst. Mr. Aaron Sherwood, of Bennington, Vt. sheared from one sheep eighteen pounds and fourteen ounces of washed wool, of a good quality, and about sixteen inches in length. The sheep was four years old this season, and weighed with the fleece on, one hundred and seventy-eight pounds. This is said to be the largest fleece ever sheared in Vermont, or perhaps in the United States.

Quere—was this the fleece of *one year's growth?—Edit. Am. Far.*

FROM THE FREDERICKTOWN HERALD.

Sir—As the hooping cough is at this time in Frederick-Town, and spreading through the county, you will render a service to the poor particularly, by publishing the following excellent remedy:

Dissolve 80 grains of salt of tartar in a pint of clear water, add to it 40 grains of cochineal, and sweeten it with loaf sugar. Give a child one year old, one tea spoonful four times a day, with a table spoonful of barley water immediately after. Boiled apples put into warm milk, may be the chief food, if they can be had. This will relieve the patient in two or three days, and cure in a week.

In the last stage of this complaint, take the tincture of bark one ounce and an half, paregoric half an ounce, tincture of cantharides one drachm, mix them, and give to a child of 12 months old 15 drops three times a day, and so on in proportion to the age of the patient.

Dinner Hour.—The modern hours of eating have reached an excess that is perfectly ridiculous. Now what do people get by this? If they make dinner their principal meal, and do not wish to pall their appetite by eating before it, they injure their health. Then in winter they have two or more hours of candlelight before dinner, and in summer they are all at table during the pleasantest part of the day, and in this to get a *long* morning—for idle people, to whom one would suppose the shortest morning would be too long! In the Northumberland household book for 1512, we are informed, "that the family rose at six in the morning. My Lord and my Lady had set on their table for breakfast at seven, a quart of beer, a quart of wine, two pieces of salt fish, half a dozen red herrings, four white ones, and a dish of sprats. They dined at ten, and supped at four in the afternoon. The gates were shut at nine, and no farther ingress or egress permitted.

The famous Duke of Buckingham could afford to have his diamonds tacked so loosely on, that when he chose to shake a few off on the ground, he obtained all the fame he desired from the pickers-up, who were generally *les dames de la cour*; for our Duke never condescended to accept what he himself had dropped. His cloaks were trimmed with great diamond buttons, and diamond hatbands, cockades, and ear-rings, yoked with great ropes and knots of pearls. This was, however, but for ordinary dances. "He had twenty-seven suits of clothes made, the richest that embroidery, lace, silk-velvet, silver, gold, and gems, could contribute; one of which was a white uncut velvet, set all over, both suit and cloak, with diamonds valued at fourscore thousand pounds, besides a great feather stuck all over with diamonds, as were also his sword-girdle, hat, and spurs." In the masques and banquets with which the Duke entertained the Court, he usually expended for the evening from one to five thousand pounds. To others, I leave to calculate the value of money; the sums of this gorgeous wastefulness, it must be recollected, occurred before this million age of ours.

Curiosities of Literature.

Holinshead says that the best wine was to be found in monasteries, for "that the merchant would have thought his soul would go straightway to the devil, if he should serve monks with other than the best."

Pulpit Candour.—A preacher in the west of England preached during the whole of Lent in a town where he was never invited to dine. He said in his farewell sermon, "I have preached against every vice except that of good living, which I believe is not to be found amongst you, and therefore needeth not my reproach."

Glue.—It has been erroneously stated in the public papers, that India rubber will make good glue; but it will never set or harden. For a strong, firm, cheap, glue, nothing has yet been discovered superior to the best kind of that which is in general use; and for a fine, clear, and trans parent kind, which will even unite glass so as to render the fracture almost imperceptible, nothing is equal to isinglass boiled in spirits of wine.

For the last two or three weeks, the town has been in a state of *anxious suspense*, respecting a Mademoiselle Mercandotti, a fascinating young lady, who had an engagement at the King's Theatre. The lady suddenly relinquished that connexion for another of a different nature, and quitted town. She is stated to be the natural daughter of the Earl of F. and was born in Spain, but has been some time in this country under the care of her noble father. Her inclinations led her to the stage, where she was guarded with paternal solicitude; and where she became an object of general interest. A rich commoner, Mr. Ball, (called the *Golden Ball*) became attached to her, and the following appears to be the *denouement.*

Mr. Hughes Ball, and Mademoiselle Mercandotti.—By a letter we have received from Banff, N. B., this morning, it appears that the fair Lady was married there to Mr. H. Ball, on Sunday the 22nd ult. and immediately afterwards the happy pair set off for Dalgetty Castle, the seat of General Duff. The ceremony was performed at Duff-house, the seat of the Earl of Fife, which is in the immediate vicinity of Banff.

English paper.

THE FARMER.

BALTIMORE, FRIDAY, JUNE 27, 1823.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7—sales—White wheat, $1 42 to 1 50—Red do. $1 42 to $1 43—Rye, 75 cents—Corn, 50 to 52 cents—country Oats, 40 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Buckwheat, $1 50—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 30 to 31 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $2 75 per bbl.—No. 2, $2 50—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 12 cts per lb.—Eggs, 12½ cts. per doz.—Hay, $18 per ton—Straw, $9.

MARYLAND TOBACCO, same as last report.

Seed Buckwheat.

Just received 100 bushels Buckwheat, particularly selected for seeding, for sale by

ROBERT SINCLAIR,
No. 1, Ellicott street, Pratt street wharf.

Also for sale as above,

White Norfolk } Turnip seeds of this year's
Yellow Bullock } growth,
and which can be warranted to vegetate.

Ruta Baga (Turnip) seed, imported from Sweden.

Sundry Implements of Husbandry as usual.

June 25, 1823.

A Gentleman and Lady

Who have for several years past, superintended a female seminary in Baltimore, are desirous of locating themselves somewhere in the country, where vicinage to a populous neighbourhood would justify the expectation of reasonable patronage.—The most respectable references can be given.—Information of such a situation, directed to A. B., will be thankfully received, and promptly attended to.

FOR SALE

At a low price and on a long credit, the FARM on Elk Ridge, occupied by Mr. H. Scott, and formerly owned by Luther Martin, Esq. containing about eleven hundred acres.

It is situated about eleven miles from this city, near the Washington road, and is considered remarkably healthy—The situation is handsome, and the land easily improved by plaster and clover. This property will be divided if required, and immediate possession given—For terms apply to

ROBERT & JOHN OLIVER.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promply attended to, addressed to J. Robinson, Baltimore.

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE, TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

No. VI.

The evidence of experience, is decidedly in favour of ten thousand dollars a mile *being amply sufficient, to open a Canal for boat-navigation, and to leave a handsome surplus remaining.*

47. In ascertaining the most eligible route for the proposed Canal between Baltimore and the Susquehanna, it would certainly be desirable that it should be located as far to the westward as practicable, so as to come in contact with the waters of Great Pipe Creek. In this direction, I have believed it would be likely to be more easily made than further to the eastward. It is evident that it would embrace more advantages. Its facilities would be more immediately extended to a wider range of country, and an opportunity afforded of introducing into it, the Junction Canal, from that of the Potomac, to much greater advantage than in any other position. Under those views, it has appeared to me, that in exploring the route, it would be a very eligible plan to commence the surveying and levelling, *perhaps*, at Bower's mill, and from thence to proceed up the main branch of Great Pike Creek to its very source; carefully noting at the confluence of the several lateral streams, the number of square inches of running water, and the precise elevation at the junction of each. Let the same kind of examination be next applied to the principal head branches of the Patapsco, the Little Conewago, the Codorus, and the Great Falls of Gunpowder, as far downward as may appear to be necessary. Then by surveying and levelling so much of the summit of the dividing ridge, as shall be required for the purpose of determining all its lowest and narrowest situations, and by connecting, with this operation, the elevation of the different sources, whose levels were before taken, the data thus obtained, when duly compared and examined, will determine to a certainty, what quantity of water, *if any*, can be carried over any low or narrow place, *without cutting*, or otherwise, the real depth and extent *of cutting* that in any and every instance, will be required to admit a certain quantity of water to flow through from one side to the other; or, in other words, by these means, it may in a short time, be conclusively known whether the proposed Canal is in reality, easy or difficult, practicable, or impracticable in that direction.

48. Should the preceding operations result in the discovery of an advantageous position, where the required supply of water can be conducted over or through the summit of the dividing ridge, the primary desideratum will then be secured. It will then only remain to explore with attention the most eligible route from thence to the Susquehanna on the one side of the ridge, and to Baltimore on the other. But owing to no such route ever having been levelled or surveyed, the aggregate rise and fall, and the length, are, of course, both unknown. Robert Mills, page 93, of his Treatise on Inland Navigation, upon what authority he has not informed us, has stated the distance at 75 miles; but I am convinced it must certainly be more. My method of calculation is thus: The distance from Philadelphia to the mouth of Swatara, as measured on a map of the country, is 86 miles; from Baltimore to York-Haven, 58. Then, because a water route of 140 miles has been located and measured between the two former points, it follows by proportion, that 86 miles, in a direct line: are to 58: as 140 miles of water route: are to 94 miles and *nearly* a half, for the length of a new channel between Baltimore and York-Haven. This, I consider quite as likely to be *over* the true distance as *under* it; but to avoid with greater certainty the risk of its being *under-rated*, let its length be stated at the round number of 100 miles.—Agreeably to the most correct data, of which I have been able to avail myself, I should estimate the rise and fall of the whole route at about 360 feet; but for the same reason, as above, I will admit that it may amount to 400 feet; that is an average of 4 feet to every mile. Having thus estimated a Canal from Baltimore to the Susquehanna at 100 miles, which at ten thousand dollars per mile, would cost one million of dollars—I next propose to submit my reasons for believing that were this sum *judiciously and economically* applied, it would, in all probability, be sufficient, not only to meet every *necessary expense*, but also to leave a handsome surplus remaining.

49. Since my preceding number was put in type, I have had access to the Annual Report of the Canal Commissioners of the state of New York, dated 24th February, 1823. By this document, it appears to be announced, as a probable event, that the Erie and Champlain Canals, will cost $7,603,386. But upon further glancing my eye over the document, I find that large disbursements are included in that sum which cannot, *with propriety*, be taken into the Canal estimates. It appears, for example, that in opening a connexion between the Salina side-cut, and Onandago lake, a work entirely new and distinct from the original 414 miles of canal; in improving the navigation of the Hudson; in the payment of interest and two other items; and for superintendance and the collection of tolls, upwards of $764,000 have been expended out of the Canal-fund. In addition to this, it appears by the Annual Report of 27th February, 1822, page 15, that contracts had then commenced to be *taken much lower than at any preceding period.* Again, it is understood that prior to the attainment of that *certainty and facility of operation*, which have been acquired by experience, the New-York movements were abundantly slower and more incident to error than at present. Great and numerous, no doubt, are the improvements, which in the course of a number of year's practice, have been developed in every department of the business, and *very great*, to a certainty, must now be the advantages of these improvements. Thus, I presume, it may rationally and safely be inferred, that had the citizens of New York been prepared, in the outset, to have brought into action all that skill and ability for which their engineers and their workmen have now become conspicuous, their canals might have been completed not only in much greater perfection, but at least twenty per cent. cheaper, (I am informed the estimates of many are much higher,) than under existing disadvantages was by any means possible.

50. But of all this superior skill and ability, we may now avail ourselves. The aid of their Engineers, their Canal-makers, and their implements can be readily obtained for a moderate compensation. For these reasons, let 20 per cent. be deducted from the $7,603,386 before mentioned, and the aforesaid $764,000 from the remainder, there will then be left, for the cost of their Canals, *were they now to be made under all the advantages of the latest improvements, in the art of Canal-making*, $5,318,709. But, by proportion 216, the cubic feet in a yard of Canal of 24 feet water-line: are to 408, the cubic feet for 40 feet water line:: as 414 miles: are to 782 miles. Wherefore admitting the size before proposed, (45) to be sufficient, the New-York 414 miles of Canal are equivalent to 782 miles of that size. Consequently if $5,318,709 be divided by 782 miles, the quotient $6,800 is the average cost per mile, at the same rate, of a canal from Baltimore to the Susquehanna. Hence it conclusively follows, that taking for our data the actual experience of the state of New York, 100 miles of Canal ought *now* to be made by the state of Maryland for $680,000; that is, out of an appropriation of one million of dollars, at ten thousand dollars per mile, a handsome surplus amounting to $320,000, no less than 32 per cent. on the original appropriation, ought still to remain unexpended.

51. This appears, of itself, to be evidence sufficiently clear and conclusive to establish my proposition, but more remains to be offered, which will be made the subject of a subsequent number. WILLIAM KENWORTHY.

AGRICULTURE.

TO THE EDITOR OF THE AMERICAN FARMER.

Cambridge, E. S. Md. June 14, 1823.

Dear Sir,

Your favour some time past, enclosing some stalks of wheat, and a copy of a letter from Mr. Nelson of Virginia, containing his notice of a new enemy to that important staple of our country, I received, and thank you for the personal politeness, as well as for the zeal, which you discover, in the cause which you have undertaken, and by your devoted attentions have so highly promoted.

I am gratified to have the proof of Mr. Nelson's letter, that a gentleman of observation and talent is occasionally to be found, who discerns the important relation of entomology to agriculture, and fears not the imputation of "studying trifles," when the happiness, and the very existence of his fellow beings are involved in the study.

The insect, which I discovered in the stalks of wheat, forwarded by Mr. Nelson, I found also in my own wheat; and it has, the present year, done infinitely more injury to the crops of Dorchester, than the Hessian Fly, though the fact has not been generally noticed by the farmers, who are too apt in the vexatious mortification of disappointed hope, to adopt a sentiment of haughty indifference, "causa latet, vis est notissima."

This new insect and the Hessian Fly, very much resemble each other in the imago or parent state, when viewed with the naked eye: in that of the larva, or caterpillar, they are very dissimilar; the one incapable of locomotion, injures the plant, chiefly by mechanically interrupting the ascent of the sap; the other, by mastication, and actually feeding upon it.

In the imago, or fly state, viewed with a glass, it is plainly discoverable that this new insect belongs to the order "Hymenoptera" of Linneus, having four membranous wings, and a sting; and that it is of the genus "Tenthredo" or "Saw Fly," of which there are many species; most of which nidificate in the buds of flowers; and others, in the tender stalks of various plants, of southern growth: their sting, which is serrated, appears to be designed, rather for an oviduct, than a weapon; by means of this saw, and duct, they are enabled to deposite their ova, in the interior of the wheat stalk, where they are speedily metamorphosed into the larva or caterpillar, which feeds voraciously upon the stalk, until fitted for the chrysalis, from which it shortly evolves into the "parent fly;" and cuts its way out of the stalk, which, by this time, is necessarily weakened, or destroyed; and a few days only, will complete this whole routine of existence and destruction, both of which might possibly be diminished, by the introduction of a solid-straw wheat, or, by the strong ligneous straw of the Egyptian wheat.

The Hessian Fly, when examined with a glass is found to belong to the order "Diptera" having two membranous wings; and to the genus "Tipula:" yet these two insects, so different in reality, have an appearance, to the naked eye, precisely similar, in the fly-state, the second pair of wings, of the Tenthredo, being generally concealed under the coarse upper wings, unless in the act of flying, or pierced with a sharp instrument.

It may appear to be a matter of idle curiosity to examine the minute differences of these animalcules; but, by accurate notice of their peculiar forms, habitudes, and modes of warfare upon the vegetable kingdom, their creation may be diminished, or their attacks considerably averted.

From causes accidental or unknown, insects may exist among us for ages, with unoffending characters, and suddenly, like swarms of infuriate Goths and Vandals, overrun and desolate the country; perhaps for a season alone; and, as unexpectedly, retire; others appear, which have never before been seen in our climate, commit ravages and disappear: such has been the fact, with the "Cassida," or "tortoise beetle," which appeared in immense swarms, and destroyed my crop of tobacco in 1819; of which I then gave you a description; they have not, since that period, been seen, except occasionally, in 1820, a few; and the oldest inhabitants, had never seen them before. The Tenthredo, I suspect, is no less a stranger to this climate; at least, it has never before rendered itself conspicuous, by the selection of so costly a diet, as that of wheat, and it is to be hoped, will shortly with the Cassida be satiated and retire. The origin of those incursive, ephemeral insects, is truly mysterious, and affords a wide field for philosophical enquiry.

Accept the best wishes of
Your ob't serv't,
JOSEPH E. MUSE.

TO THE EDITOR OF THE AMERICAN FARMER.

CHEAT.

Sir,

There is a manifest difference between the triticum and the plant called cheat—or rather the brumus, oat grass, or brome grass—an annual grass of this country. The circumstance of wheat changing into cheat, is a curious fact, if it was true. But I cannot believe it possesses such wonderful properties. It is very evident that the plants of the bromus are not issues from the roots of wheat stubble. On an examination of the two plants, wheat and oat grass, or cheat, if you please, (I enclose some plants of each for your inspection,) I am sure you will agree with your correspondent, "S. V. S." that wheat cannot change to another genera, and withhold your assent to the doctrine of "Plain Sense," that "wheat turns into cheat," which is completely void of foundation. It is true it is the general opinion of too many of our best informed farmers. I have heard many of them declare that should wheat be eaten down at a certain time of the moon, in the spring, by a horse, it would turn to cheat. That noble animal must alone perform the operation—any other beast will not answer. They maintain other opinions, equally erroneous, that the moon's influence on vegetables and pork, is very great: it is, if certain seeds are sown, at an improper time of the moon's age, the plants will not attain their proper perfection—and if you kill your hogs in the wrong sign, your bacon in boiling, will shrink up to one half its size. I will add another opinion, very common and confidently maintained, by the wise ones, that there are, also, peculiar times in every month, *more safe than others*, for the castration of lambs, and the spaying of sows. That the greater part of your lambs and sows, will die, if the proper time is neglected in performing the operation. I consider the moon's influence, and all such notions, to be *a cheat*. The moon has, no doubt, some influence, in the maturing of plants; but it cannot possibly have any agency in the metamorphose of that inestimable plant, *wheat*, and the success or failure of altering your lambs and sows. The oat grass is to be found growing spontaneously every where in my neighbourhood, in places where wheat has never been cultivated—in woods, in meadows, and in damp situations, and even among bull rushes. The proof of the latter, accompanies this letter, *the rush and cheat growing together*. The probable failure of the crops of wheat with "Plain Sense," arises from the Hessian Fly, or other insects—the unfavourable winters, blue grass, and from sowing the same kind of grain, so repeatedly on the same ground, and not any aberration of nature, from her established course. The greater part of the plants growing in a stack yard, where wheat has been got out, or around a barn, to be cheat, is a very common occurrence. It is easily accounted for—the scattered grains of wheat, are soon culled by poultry, birds, &c. leaving the very small, or light seeds of the *cheat* to vegetate. This is no proof that wheat undergoes a change. It is true that wheat in some situations will degenerate; but it has not the faculty of transposing itself in the manner supposed by "Plain Sense," and neither is cheat, a mule plant, for it grows readily from seed, which is sufficient proof that it is not the production of spurious wheat. I now leave the matter to the advocates of the *doctrine* of *equivocal generation*, to prove that wheat turns to cheat.

Your humble serv't,
R.

June 13, 1823.

TO THE EDITOR OF THE AMERICAN FARMER.

WOOL.

Felicity Farm, *June* 23, 1823.

John S. Skinner, Esq.
Dear Sir,

The price of the different grades of wool, in the fleece, at Stubenville, Ohio, on the 10th of May, 1823, was as follows:

Prime full blooded Merino,	80 cents per lb.
Second rate, - -	65
7-8 - - -	55
3-4 - - - -	40
1-2 - - -	30
Common, - - -	25

The above prices are paid by Messrs. B. Wells, & Co. who carry on an extensive woollen manufactory. The cloths made at their valuable establishment, are reported to be of the very first reputation, as to fabric and durability of colour.

In the year 1822, the price of wool at the same factory, was for full blood, 80 cts.—7-8, 60 cts.—¾, 50 cts.—½ blood, 40 cts. As the cost of transportation to Ohio, is small—it is to be hoped that our manufacturers will be able to give prices, for fine wool, sufficiently encouraging. We ought to pay particular attention to that inestimable animal, the sheep.

Your obedient servant,
R.

CULTURE OF THE HOP.

My Dear Sir, *Boston*, *June* 3, 1823.

I have to apologise to you, for my negligence, in delaying so long, to reply to your enquiries, respecting the culture of hops. The method which I have practised, has been to prepare the ground in the same manner as is common for raising Indian corn; after ploughing it well, to harrow it, and then furrow it cross ways, so as to leave the hills eight feet apart—then to manure in the hill with *quite* as much as you would do for corn. In the spring, cut your slips from the *root* of the hop-vine about nine inches long, and lay them upon the manure, three or four in a hill, and cover them with earth about as deep as is usual to cover corn—thus the planting, &c. is complete. You may for the *first* year, plant corn or potatoes between the hills, if you please; but I think it better economy, not to do it, because you may plough with oxen, between the rows, to lighten the ground preparatory for hoeing, which ought to be done three times during the summer. You get no produce the first year, and therefore it is unnecessary to pole them, unless perfectly convenient.

In the spring of the second year, you place, to each hill, two poles of about thirteen to fifteen feet above ground; and as the vine grows, you train it to the poles; it is best to hoe them three times in the season, and (unless your land is very rich) it will be well to add some manure at the first hoeing. In gathering in the produce, you cut the vine to the ground, and pull up the poles, lay them across large wooden bins or boxes, made of rough boards, about ten feet long and five or six feet wide, into which the hops may be stripped off. This work may be performed by women and children. You take them from these boxes in bags, and carry them to the drying kiln, which is generally placed at the side of a hill or rising ground, for the convenience of taking the hops in upon the cloth or netting, which is stretched upon the cills above the furnace, which is at the bottom, where the fire is made, which ought to be with charcoal, because it gives the hops a much better flavour than by curing them with a fire made of wood. It is necessary that some careful person should attend, constantly stirring the hops with a rake during the process of curing, so that they may be well dried, without discolouring them. After you take them from the kiln, they must be spread (under cover) in an airy room, and constantly moved with a rake, once or twice a day, for ten or twelve days, when you may bag them for market.

This hasty, imperfect sketch, is from my own experience only. I presume you may obtain better information from those who have been longer in the habit of cultivating this vine.

I am, with great respect,
Your friend, and ob't serv't,
ISRAEL THORNDIKE.

Gorham Parsons, Esq.

The above information was obtained at the particular request of the Editor of this Journal, who is proud to shew amongst his patrons and correspondents, gentlemen so successful, and so much distinguished, in every walk of industry, to which they have turned their attention.

Edit. Am. Far.

"IMPROVED SHORT HORNS"—THEIR QUALITIES AS MILKERS.

We are happy to have it in our power to lay before our readers the following letters, which from various considerations should be read with particular and respectful attention—Mr. Carpenter, it will be observed, speaks of the Short Horns by comparison with the cattle of *Lancaster County;* which, of themselves, we have always understood to be superior to the common cattle of our country, as, indeed might be expected, from the well known fertility of that county, and the proverbial care and attention bestowed upon their domestic animals, by the discreet, steady, and skilful farmers residing in it. To this, may be added the recollection that Mr. Carpenter is himself, a member of one of the oldest, most respectable, and wealthy families of that settlement; born on the land which he judiciously tills, and qualified by observation and experience, to form a correct estimate on any agricultural subject to which his attention may be directed.

Mr. Tomlinson is one of the most respectable, spirited, and successful *practical* farmers of Philadelphia County, well informed, in all that relates to his vocation, and particularly skilled in every thing connected with the properties of Farm Stock, and the production of butter.

The cream of which he speaks, was taken, we are assured, *without preparation* from the *first drawn milk* of a thorough bred, "two year old" Short Horn heifer, which had calved but five weeks before, and has been tied to a stake, on a field of artificial grass from which hay had been recently cut. The age of the animal, the period after calving, the want of nutrition, in the "after marth" of artificial grasses, and the absence of "Strippings" are well known to essentially affect the colour, richness, and flavour of cream.

Edit. Am. Far.

FOR THE AMERICAN FARMER.

Carpenter Hall, June 14, 1823.

DEAR SIR,

You desire to know the result of my experiments with the Short Horn stock, I purchased from you last year, and my opinion of the Neat Cattle of Lancaster county. Males of various breeds of Neat Cattle have been brought to this county some years back, but they have been so much crossed with the common stock, and so little attention has been paid to purity of blood, that at this time there are none that shew any marks of a distinct breed.

The two half blood heifers, by the Short Horn bull Denton, which you stated, had calved last July, produced through the course of last winter, butter of a better quality than any I ever saw made in the month of May—and it was always obtained in about ten minutes churning; one of these heifers produced a calf the beginning of June, the other (the three years old) has supplied nine labouring men all spring, with a sufficiency of milk, (and butter once a day;) which production exceeded that of *a fresh milk cow* of the common stock, which *I had selected with great care, and that proved to be as good a milker, as the neighbourhood could produce.* I am sorry that I cannot give you an account of the production of butter from the imported cow Moss Rose, in a given time, as her calf had got so old before the trial was made, that it would not take to other cows; but I do not hesitate to give it as my opinion, that twelve or fifteen pounds of butter, of the finest quality can be made from her in one week, as she possesses the power of secreting rich milk, in a greater degree than any animal I have ever seen. I expect that this is enough to satisfy you, that as milkers, the Durham Short Horns are not to be surpassed. The bulls are docile and good feeders.

These cattle are hardy; and their value can only be estimated by him, who considers the time it requires to alter the form and propensities of the animal, and the degree of perfection it may be brought to; I therefore think it a want of thorough knowledge of the animal, that makes any person object to the price of the Durham Short Horns.

All my neighbours express their astonishment, at viewing my cattle, and highly approve of the selection.

I am sir,
Your most ob't servt,
H. A. CARPENTER.

JOHN HARE POWEL, Esq. *Corres. Secr'y to the Penn. Ag. Society.*

Powelton, June 29, 1823.

Dear Sir,

Was the cream which I sent to you this afternoon very rich?

Was its colour deep?

Was it as good as any you recollect to have seen?

Had you not on a former occasion noticed the quality of cream from my cows, and did it not appear equal to that which you have seen to-day?

How many head of neat cattle do you keep?

How many have you of Mr. Joseph Sims' breed, so justly celebrated for the purposes of a dairy?

At what price did you sell your butter in the Philadelphia market in the last spring?

I am Your's, &c.
JOHN HARE POWEL.

Mr. JOHN TOMLINSON,
Woodland Farm.

Respected Friend,

The cream I tasted was very rich, its colour and quality were quite as good, as any I recollect to have seen. That which I had noticed at thy house, was I think as good. I have forty-five heifers and cows of various ages. I have twenty-nine head of Joseph Sims' breed. I sold my butter at thirty-seven and an half cents per pound, the price which I asked, when butter was selling at from twenty-five to thirty-one cents in the same Market.

Respectfully,
JOHN TOMLINSON.

JOHN HARE POWEL,
Philad. County, 6th Mo. 30th, 1823.

FOR THE AMERICAN FARMER.

ALBION'S FIFTH LETTER TO HIS SON.

"*A various groupe the herds and flocks compose,*
Rural confusion! on the grassy bank
Some ruminating lie; while others stand
Half in the flood, and, often bending, sip
The circling surface—in the middle droops
The strong laborious ox of honest front."

In the summer season, a farmer and grazier who attends to his business, "till his feet throb, and his head thumps" can feel but little inclination to write, and this must be the apology for so long delaying the continuation of my letters to you.

I now propose saying a few words on the cattle of the Albion farm, but having given a description of them in a letter to the Hon. Henry Clay, which you may find in the "American Farmer," vol. 4, No. 33—it appears unnecessary to repeat here, what is already before the public.

In order that you may form a more correct opinion of cattle in general, I wish you to examine the proceedings of the Smithfield show in London, from its first establishment, as you will there find, that all the most celebrated breeds of cattle in the united kingdom, frequently came in contact for premiums at the christmas meeting; and, that generally, the Herefordshire breed took the premium for the best oxen shown, until the Society passed a rule, that any person having a prize awarded him, should not receive a similar one the succeeding year; which shut out Mr. Westcar, and others, who were the zealous advocates of this breed; and then the short horned cattle came in.

As I have only a part of the Smithfield proceedings by me, I can give you only the following particulars, which may be found in the "Farmer's Journal" christmas show, 1810—class one, Mr. John Westcar a prize of twenty guineas for a Herefordshire ox, dead weight

4 quarters, skirts and kidneys - -	lbs. 1838
Loose fat, - - - - - -	190
Hide and horns, - - - -	119
Head, brains and tongue, - - -	56
Feet, - - - - - - - -	33
Hart, lights, sweetbread and bladder, -	56
Tripe, seck, reed, liver, gaul and melt -	62
Dead weight, - - - - - -	2,354

The particulars of the show in 1811 I cannot find.

In 1812, Mr. Westcar's Hereford ox, weighed as above, and took the first premium.	Total lbs. 2266
In 1813, do. do. - -	2160
In 1814, do. do. - -	2348

In 1815, Mr. Westcar's Hereford ox again took the first premium, but I cannot find his weight.

In January 1811, "a heifer, belonging to Mr. Vyse of Hockley House, near Birmingham," from my Herefordshire Bull, bred in and in and would not breed, "was killed, of the following weight: 4 quarters, 1376 lb.—fat 173 lb.—hide 99 lb., and cut seven inches of solid fat along the back"—at Christmas 1815, a similar heifer was shown at Smithfield, of exactly the same breed, which was so heavy that her owner was fearful she would die from fatigue during the show, and sold her in all haste, to Lord Somerville, who took her to his farm: this is the heifer I alluded to, in my letter to Mr. Clay, as being so fat on the back.

Many other particulars might be found of the great weight, and vast inclination to fatten, of the Herefordshire cattle; but enough has been said to satisfy you they are sufficiently large; and, that they are very beautiful, every person will admit, who has seen the best of them. I therefore some years since, after reviewing every kind of cattle in England, made up my mind that they were to be preferred to any other breed, and I still retain the same opinion; and the north Devonshire cattle stand next in my estimation; indeed, if you leave out these, and one or two other kind, England's cattle will be a "motely medley."

It would be difficult to trace the origin of the Hereford breed of cattle; it appears to me that they are a mixture of the north Devon and the best large long horned kind—but by a steady and uniform perseverence of the breeders in that country *for a great length of time*, their cattle are nearly uniform in colour and appearance, which will but be the case with the Durham or any other mixed breed for a number of years—and without uniformity in each kind of stock, ah, in each field too, on his farm, the owner never appears a man of a steady judgment; indeed, to excel as a farmer and grazier, a person must, early in life, possess fixed principles on every part of his business, and having once made up his mind what is best in every part of the same, he must persevere methodically, as one erroneous step may nearly ruin the beauty of the whole.

Animals *from a mixed breed*, are frequently as unlike each other, as can be well conceived—

the bull Patriot, sold by Mr. Coats to Connington & Loft for 500 guineas, and the bull Waddington, sold to Mr. Rodgerson, were *full brothers*; yet as dissimilar both in colour and appearance, as two bulls could well be; the former being a fine animal of a dark colour, and the latter white, and just like the coarse, large boned, hard feeding Holstein cattle in Yorkshire, and on the Continent; yet the stock from Waddington was much better than that from Patriot, as I have often witnessed; but both were inferior in quantity and quality of flesh, to the Herefordshire cattle, which grazed in the adjoining pastures for years together.

That the Durham are a most valuable breed of cattle, there can be no doubt; but they require more support, than either the Herefords or Devons do, and I think, will not ultimately be so profitable to graze in the United States as either of these breeds, and without good management, the Durham will degenerate, as the Holstein blood in them is certainly but little inclined to fatten, and will require more judgment than is possessed by mankind in general, to keep it undermost; and if it once gets the ascendancy over the "*good Scotch blood*" in them, these cattle will be but little better than the common Yorkshire, which during the French war, were almost entirely sold to Mellish, the government contractor for the British navy, they being considered by Epicures "only sailor's meat."

I am inclined to think that about the same time the Holderness cattle were crossed with the Scotch breed, with the view to improve their flesh and frame, a similar attempt was made to improve them by a cross with the north Devon, as the first *improved* stock I saw of the former, were nearly all of a *red colour*, and it is to be lamented that a red or some dark colour, could not have been kept up amongst the improved breed, as it is well known, that all light coloured cattle are more tender, and far more liable to be filthy than those of a dark colour.

With respect to breeding cattle, nearly the the same system may be observed with them, as in all other animals; that is, prefer those of best symmetry, that have descended through a long line of good ancestors, in preference to an upstart—and when these are of equal symmetry, prefer the largest—but never lose sight of symmetry; bearing in mind, that an imperfection in a *small* animal, may not be so glaring as in a larger one, and yet be in proportion with the size of it, and equally objectionable. Avoid, if you can, breeding in and in, and particularly if you want *female breeders*, as you will generally find their descendants have bad constitutions, and of course suckle and breed badly, and the young ones very difficult to keep alive, as you have often witnessed; you may occasionally, by this means, obtain an extraordinary animal, but they are to be considered rather as monsters, than as any proof of good management; and, ultimately, the system will disappoint those who try it—if you have some very choice stock that you must intermix too near, or lose the breed, try to keep the purity of the blood in the *male* line, for whenever both male and female are too nearly related, their descendants will ultimately degenerate, whatever may be said to the contrary respecting Mr. Bakewell's system; indeed, that sagacious breeder was too shrewd a man to tell the "busy bodies" his secrets; but as some "particular friends must know" he told them what he well knew would most certainly prevent their ever becoming his rivals, as some of his late neighbours know to their own cost.

In order to be a judge of the best symmetry of animals, you must be able to give a reason for your opinion, or you would be considered in your native country a mere superficial novice—accustom yourself therefore, without delay, to examine different kinds of animals with the greatest attention; beginning the examination at the nose, and going step by step to the tail, so that when you have finished, you can say where the animal is defective and where it excels—do this in a particular manner, with stock reputed first rate; and by practice, you may be able in a few minutes to form a pretty correct opinion.

It is pleasing to observe how readily some graziers in England, select in a market, a number of young animals from different droves, and how good they all prove as each kind arrives at maturity—and it is still more surprising to witness the London horse dealers, how readily they find out a first rate horse, from amongst hundreds and hundreds at a fair, and how uniform they can match them in pairs without bringing them together until they start for home, and how well their opinions agree respecting their value; this kind of information is principally obtained at the numerous markets and fairs in England, where farmers and others meet weekly to buy and sell their live stock and produce; an advantage much wanted in the United States.

ALBION.

ON THE USE OF FLAX SEED AS FOOD FOR STOCK.

Having the pleasure last summer, of a short visit from an English farmer of great experience and respectability, we requested him, at his leisure, on his return, to favour us with information as to the construction of perpetual lime kilns, the culture and cure of hops, the manner of using flax seed as feed for cattle, &c. and we publish now what we have received in relation to the last topick.—*Edit. Am. Far.*

Linseed is often used, boiled to a jelly and mixed with cut hay or straw for store cattle, and would be found very valuable if used in that way with you, until more ruta baga, (or what we commonly call Swedish turnips,) or other turnips, cabbages, or mangel wurtzel, are grown—but when linseed cakes are to be had from the oil mills at a reasonable rate, they feed cattle so much better, that the seed is not much used for that purpose. You generally cut the parts out of your newspapers which you think will be useful. I think it is probable you may not have the numbers of the Farmer's Journal of Feb. 1819; or others which contain letters on the subject; therefore I shall send you copies of several letters which were answers to the same question you have asked me about linseed.

To the Editor of the Farmer's Journal.

ON FEEDING OXEN WITH LINSEED.

Lincolnshire, Jan. 22, 1819.

SIR,

Being a constant reader, and well wisher of your valuable Journal, and knowing nothing will tend more to its wide circulation, than practical communications, on subjects in any way relating to agriculture, I feel myself (having used linseed largely) called upon to answer a letter, in your last Journal (signed *A Grazier*, on feeding oxen with linseed) and thus to endeavour to add to its usefulness, and at the same time to afford any information, which I may happen to possess, to those who have not had an opportunity of gaining it by experience or observation. I will now state my plan of giving linseed to oxen, and if your correspondent (*A Grazier*) derive the smallest benefit from it, the purport of this letter will be fully answered. Finding in the autumn, my Swedish turnips, on which I chiefly depended for stall feeding oxen, an indifferent crop, and oil-cakes excessively high in price, I determined to try linseed boiled, knowing it to have been used with success in small quantities. I first erected my copper which holds 90 gallons, in a building just large enough to contain tubs to cool the liquors in when boiled: after a few trials, two pecks of linseed were found, when boiled, enough to produce a jelly of sufficient consistency to mix either with cut straw or wheat chaff, from the barn, being not too thin to drain from them, or too thick to unite properly. The seed is put into the copper with the water, and from the time it begins to boil, remains three hours; care is always taken to stir it continually for the first quarter of an hour after it is perceived to boil. The hot liquor is always put into a tub by itself, as when mixed with any boiled and cold, it causes fermentation, and an unpleasant smell to arise from it. At first in the morning, my oxen have about two pecks of cut Swedish turnips each, while the linseed feed is mixing. Hay, if more plentiful than turnips, would, perhaps, be equally as well. The linseed liquors, mixed with cut straw or chaff, is given to them as much as they will eat at once, at three separate times during the day; they also have one feed of turnips in the afternoon, the same as in the morning; they have neither hay nor water: water was given to them once, but they did not drink it. One man is kept constantly to boil; he boils sixteen coppers full in a week—six days—which at two pecks of linseed to each copper full, is just one quarter: two bushels of linseed per week—seven days—are allowed for nine oxen, which is when boiled, not quite six gallons of liquor per day for each ox; and which quantity of liquor will saturate as much chaff as a sixty stone ox, country weight, can consume, together with the turnips allowed. If the linseed were steeped, or gently crushed, it would be no worse. There is no doubt that an ox, with as many oil-cakes, and as much good hay as he could eat, would get fat sooner than with linseed, used so sparingly; but those who have no hay may use linseed with advantage, when they cannot use oil-cake. Yet I can assure those who may wish to try the quality of boiled linseed, my oxen rest well, and thrive quickly; and that I have succeeded so well this year, that if oil cake is £10 per ton, or turnips ever so good, I shall, (if health permits) pursue my plan another year with increased ardour. If you, sir, receive no letter which you deem likely to be of more service to (*A Grazier*,) perhaps you will insert this, from your obedient servant,

R. S.

To the Editor of the Farmer's Journal.

ON THE USE OF LINSEED IN FATTENING OXEN.

SIR, *Sussex, Jan.* 24, 1819.

Observing in your paper of the 18th inst. a letter from Somersetshire, signed "*A Grazier*," requesting information on the method of using linseed for fattening oxen, I beg, in reply, to state, that the manner in which I have used linseed with good effect, is to grind one bushel of linseed with two bushels of bran. I began by giving it my oxen in small quantities, until they took to it kindly, gradually increasing, until each ox consumed about two gallons of linseed per day, with the proportionate quantity of bran, giving half in the morning and the remainder at night: their other food has been good meadow hay.

I consider linseed, according to the present price of corn, to be the cheapest food of this description that can be used. As I have before observed, it has answered my purpose extremely well.

I remain sir,
Your ob't serv't,
A SUSSEX GRAZIER.

To the Editor, &c. on the same subject.

Hollyport, January 24, 1819.

Sir,

The query of your correspondent, in your paper of Monday last, "on the manner of using linseed for fattening cattle," has induced me to offer to your notice the information I may be able to afford, from the instances which have fallen under my observation, of linseed being used instead of oil cake.

A friend of mine at Hare-Hall, in Essex, is now fattening eighty head of oxen, besides some calves, sheep, and pigs, from a mixture of bruised linseed, bruised barley, malt dust, and chaff of wheat straw; and the mode of preparation, is as follows:—

Three bushels of barley, well bruised in a mill for that purpose, two bushels of linseed bruised in like manner, and four bushels of malt dust, are put into a copper with 150 gallons of water, and boiled until the barley and linseed are reduced to half. The liquor being of the consistence of thick soup, is then poured upon 30 bushels of chaff of wheat straw, and well stirred—about a pail full of this mixture is given to each ox three times a day, warm. The calves at first, refused it, but the addition of a pail full of treacle to a copper full of the other ingredients, made them take to it with avidity: the sheep and pigs appear to relish this food as much as the oxen, and all thrive exceedingly.

I should have observed that the quantity of ingredients above mentioned, affords one meal to eighty oxen, forty calves, six sheep (Leicesters) besides some pigs.

The above observations are confined to one example, because it is conducted on a large scale. Some of your other correspondents may probably, favour us with some other communications on a subject, which appears to be of considerable importance to the agricultural interests, and to society at large.

H. WALTER.

From a Compendious Dictionary of the Veterinary Art.

ON THE DISEASES OF DOMESTIC ANIMALS, AND THEIR CURE.

Diuretics. Medicines which increase the discharge by urine: diuretics may be given either in the form of balls or powder, receipts for which will be found in the *Veterinary Pharmacopœia:* but as some horses of delicate appetite refuse to eat the powder in their corn, the ball should, in such cases, be preferred. In dropsical swellings of the legs or other parts, diuretics are highly useful; they are also beneficial in chronic cough, and have in many instances proved the best palliative for broken wind. They are commonly given when a horse is observed to stale with difficulty, or when the urine is foul and of a whitish or whey colour, and often with good effect; it is necessary, however, to distinguish carefully between such cases, and inflammation of the kidneys or bladder. (See *Urine, Retention, and suppression of.)* Horses that are frequently rubbing themselves, or have pustules breaking out on different parts of the skin, or such as are disposed to those swellings commonly termed Humours, generally derive much benefit from the use of diuretics: they should not, however, be continued too long at any one time, as considerable weakness would probably be the consequence. The practice adopted by some grooms, of giving strong diuretics upon every trivial occasion, and often without any reason whatever, is highly injurious; the bladder and kidneys are often rendered so irritable by such indiscretion, that a horse will be obliged to stale several times during a short ride, and if urged to go on by an inconsiderate rider without being allowed to stale, some serious disease of the bladder may ensue. I am inclined to believe, that the kidneys are sometimes considerably enlarged by the frequent use of strong diuretics, and that I have seen them incurably diseased from the same cause. A good diuretic ball may be made with

Soap, half an ounce.
Powdered yellow resin, half an ounce.
Common turpentine, two drachms.
Aniseed or caraway-seed powder, as much as will form a ball.

The diuretic powder may be made by mixing together

Nitre, half an ounce.
Yellow resin, half an ounce.
Tartarized antimony, one drachm.

See *Veterinary Pharmacopœia*, or vol. ii. of the *Veterinary Medicine.*

Docking. Cutting off part of the tail: the instrument used for this purpose is represented in plate 2, fig. 2, in the 4th vol. of the author's *Farriery*, where the operation also is described. I have only to observe here, that the earlier this operation is performed, the better will the horse *carry his tail*, as it is termed; it should never be delayed beyond the first year, and then very little if any searing will be required. It has been said, that by keeping up the tail in an almost perpendicular direction at the time of docking, and searing it in that position, nicking would be rendered unnecessary.

Drenches or Drinks. When it is necessary that any medicine should operate speedily, as in cases of colic or gripes, this is the best form in which it can be given. Cattle medicine is always given as a drench, though Mr. John Lawrence seems to think, that a ball would be often a more desirable form; those who have an opportunity of making the experiment on cattle might easily ascertain whether there be any well-founded objection to the exhibition of a ball. Drenches are usually given by means of a bullock's horn, the large end cut in the form of a spout; a bottle is sometimes substituted for it, but there is danger of its being broken in the horse's mouth. In giving a drench, the tongue is to be held down with the left hand, and the head being moderately elevated, it is to be poured gradually down the throat. The head is be kept in this position until the drench is swallowed: but if the animal happen to cough while the drench is in his throat, the head should be immediately let down. In preparing drenches, farriers generally make use of ale, but this can only be proper for cordial drenches; on other occasions, water or gruel is the best vehicle. When the throat is inflamed and sore, no attempt should be made to give drenches.

Dropsy. This disease consists in a collection of serous or watery fluid, either in the circumscribed cavities of the body, as the abdomen or belly, the chest, and ventricles of the brain, or in the cellular membrane under the skin. (See *Cellular Membrane.*) The latter kind of dropsy is most common in animals, and often exists unaccompanied by the former; but whenever there is a collection of water in the cavities, there is generally at the same time dropsical swellings externally. External dropsy, or anasarca in medical language, is often named Water-farcy by farriers: and many of them have acquired considerable reputation for their success in curing the farcy; but there is not the least analogy or affinity between the two diseases; and their boasted specifics are generally strong diuretics, mixed with many useless ingredients. External dropsy sometimes affects particular parts, as the legs, belly, chest, or lips; at others, it is diffused over great part of the cellular membrane. A dropsical swelling may be distinguished by its coldness, and by its retaining the impression of the finger for some time. Those swellings which sometimes affect the legs and other parts, in consequence of high feeding without sufficient exercise, arise from an inflammatory state of the system, and are soon removed by bleeding, exercise, and mild diuretics; but that kind of dropsy which arises from a weakened state of the system and particularly when attended with an accumulation of fluid, either in the chest or abdomen is not so easily got rid of, and sometimes terminates fatally. Colts are subject to a dangerous kind of dropsy, which is accompanied with quick pulse and loss of appetite, but without any remarkable appearance of inflammatory affection. The swelling generally begins about the sheath, extending to the belly and chest, and gradually increases until it becomes of an alarming size, particularly in the belly. When the disease terminates in death, a large quantity of fluid is found either in the chest or belly, often in both; the pericardium or heart-bag also partakes of the disease. On the commencement of this disorder, bleeding is generally proper, especially if the pulse is quick and the membrane under the eye-lid unusually red; and in this case a large quantity of blood should be taken off. If, when the blood has coagulated, a coat of buff or size is found on the surface, it shows that the evacuation was necessary, and that it may be repeated with advantage if the symptoms do not abate. Mild diuretics should be given now and then, so as to keep up an increased discharge of urine: at the same time, the animal's strength should be supported by a moderate use of nourishing food. His drink should consist of oatmeal mixed with water, and he may be allowed to eat carrots, lucerne, vetches, or a small quantity of oats now and then. When there is considerable weakness, tonic medicines are proper, as Peruvian bark, cascarilla bark, with an aromatic, as cinnamon, caraway seeds, &c. Same practitioners give also the mineral tonics, such as salt of steel, white vitriol, &c. Diuretics, however, are the essential remedies, or sheet-anchor in all dropsical affections. When the swellings become so large as to be troublesome on account of their weight, it will be proper to scarify them, by which, in a short time, they will be considerably reduced. The best instrument for this purpose is the common horse lancet, which should be plunged, to the depth of nearly half an inch, into several places, choosing the most depending, or lowest parts of the swelling. Horses kept in low swampy land, or on moors, are also subject to a dangerous kind of dropsy, which in such districts is generally termed Moor evil. I have been informed by an intelligent correspondent, a person of considerable experience in the complaint, that the following preparation has proved almost invariably an effectual remedy for this disorder, and that before this preparation was known, the disease very often ended fatally: he adds, "it comes the nearest to a specific of any medicine I ever knew; I never bleed, rowel, or scarify in dropsy." This receipt is an improvement on old Gervase Markham's for a "Dropsie or Evil Habit of the Body;" but this improvement, or rather addition, (from two to four ounces of soap,) is the most efficient ingredient, if not the only one in the formula. Take of strong ale, five quarts, (Markham directs a gallon,) set it on the fire, and skim off the white froth which rises; then put into it a handful of wormwood with the stalks, and let them boil together until reduced almost to a quart, then add three ounces of treacle, one ounce and an half of long pepper and grains of paradise in fine powder, and from two to four ounces of castile soap. The whole to be given at one dose, and the horse exercised immediately after till he sweats. I should have before observed, that whenever costiveness occurs in dropsy, laxative medicines should be given.

Dropsy of the Chest. This is a consequence of inflammation of the lungs; and when it happens, that important organ has generally been so far disorganised or injured, that there is not the least chance of the animal's recovery. In some instances it is less rapid in its progress than in others, and from an apparent abatement of the inflammatory symptoms and fever, the practitioner may be led to prognosticate a favourable termination of the disorder; but according to my experience, it almost always ends fatally. Diuretics and tonics, with a nourishing diet, are the remedies most likely to do good. Blistering the sides extensively may be worth a trial. Mr. Blaine recommends the operation of Tapping; that is, making an opening between two of the ribs, in such a situation as to allow the water to run off freely. I once tried this method, and drew off more than half a pail full of water; but it did no good, nor do I expect it ever will. The horse died in a short time after, and the lungs were found in a very diseased state, particularly on the surface or *pleura*, which was covered with flakes of coagulable lymph; the inner surface of the ribs and diaphragm, as well as the pericardium, were in the same state.

From a series of essays on agricultural and rural affairs. By "Agricola," a North-Carolina farmer.

PEACH TREES.

The Peach may be ranked with the most delicious fruit that can be produced in any country. It is generally raised from the stone, but the best kinds are those propagated by innoculation or grafting.

The peach tree is subject to many calamities, and is in general short lived; its preservation, to any considerable age, is only to be ensured by skill and attention—its precious fruit, is therefore forbidden to the slothful, the negligent and the ignorant.

The peach tree is liable to three misfortunes or calamities—first, the fly— second, the breaking of limbs, which brings on a decay—third, to wounds received on the body by bursting of the bark by severe frosts in winter, and the injuries done to it by birds, insects, &c.

But the most general decay of peach trees, is owing to a worm which originates from a large fly, that resembles a common wasp. This fly perforates the bark, and deposites an egg in the moist or sappy part of it. The most common place of perforation is at the surface of the earth, where the rougher and harder bark which is exposed to atmospherical influence begins to change to the softer character of that which covers the roots. In this particular part the fly is able to puncture the surface, and there introduce its eggs. This they perform in our climate from the middle of July through August and September. In August, for the most part, the worms assume the crysalis state, and in eight or ten days are transformed into flies. Then they immediately begin to deposite their eggs, which are soon hatched into worms, aud thus the round of transformation common to the insect tribe is completed The eggs deposited by the fly at the times and manner just stated, are changed into worms; and it is in the worm state they do the mischief, by preying upon the soft inner bark of the tree, which is the medium of circulation for the sap, thus interrupting the flow of the sap—the immediate consequence of which is, the destruction of the fruit, and finally the destruction of the tree. Gum issuing out of a peach tree at or near the surface of the ground, is a sure sign that there are worms under the bark.

Various means have been resorted to, and with various success, for the purpose of destroying those worms, or of preventing them from doing injury to the trees. These various methods shall now be given as practised by some of the most respectable and distinguished farmers of our country.

DR. TILTON OF THE STATE OF DELAWARE.

I shall say but little on the cultivation of this useful tree; but will barely remark, that it should always be planted shallow, with the soil raised about it in the form of a hill; that Forsythe's method of heading down the trees a year or two after planting, insures the most vigorous growth; and that tilling the ground, for some years, after setting them out in orchards, is essential to the rapid and successful growth of the trees. The diseases and early death of our peach trees, is a fertile source of observation, far from being exhausted. Among the insects which are great enemies to these trees is a little beetle, called curculio, about the size of a pea bug, which punctures the fruit and occasions it to fall off and rot before it comes to maturity. These insects may be exterminated by means of hogs. This voracious animal, if suffered to go at large in orchards, and among fruit trees, devours all the fruit that falls, and among others, the curculions, in the maggot state, which may be contained in them. Being thus generally destroyed in the embryo state, there will be few or no bugs to ascend from the earth in the spring to injure the fruit. Many experienced farmers have noted the advantage of hogs running in their orchards. The best method of destroying the wasp-like insect (which beres the bark of the tree, and delights in that region just below the surface of the earth) that I have ever employed, is to draw the dirt from the root of the tree, in the fall, and pour boiling water on the roots. In the spring, my practice is, to return the soil to the tree, in the form of a hill. By means of this sort, a tree may be preserved many years.

RICHARD PETERS, PENNSYLVANIA.

The worm or grub, produced by the wasp, depositing its progeny in the soft bark, near the surface of the ground, is the most common destroyer of the peach tree. I remove the earth a few inches round the tree in August or September. After July the wasp ceases to pierce the bark, and to make its deposites. I pour round the butt of the tree, beginning about one foot above the ground, a quart or more (not being nice about the quantity) of boiling hot soapsuds or water. This kills the eggs or worm lodged in the tender bark; and, of course, prevents its ravages the next season. I also have the trees bared at the roots and exposed to the winter. I have lost some in this way; but I still continue the practice. I have been in the habit of doing this for ten or twelve years, and prefer it to any other treatment. To supply deficiencies, I plant young trees every year. When trees become sickly, I grub them up; I find that sickly trees often infect those in vigor near them, by some morbid effluvia. The young trees supply their loss, and I have no trouble in nursing those in a state of decay; which is commonly a hopeless task.

WILLIAM COXE, BURLINGTON, NEW-JERSEY.

I always search the roots of my trees twice in the season, last of July and September. On the first of October, I open the ground around the roots so as to leave a basin of the size of a common wash basin—in this state they are left until the next spring—the ice and snow which fill the hole during winter, effectually kills the worm should it have eluded my search. I also endeavor to prevent the limbs from breaking and from excessive bearing, by close pruning, which I have long found more efficacious in peach than in any other fruit trees.

JOHN H. COCKE, VIRGINIA.

I think I have discovered a remedy for the worm which preys upon peach trees at or near their roots, and which is so destructive to their existence.— This remedy consists in tobacco. As much cured tobacco as is tied up in a bundle, viz: from four to six leaves, is sufficient for a tree. The tobacco in a moist state, so as to render it flexible, is bound around the body of the tree just at the surface of the earth, encircling the part where the fly deposites its eggs. This precaution is to be taken before the hatching of the flies—the first of July is early enough, but to make the experiment successful it should not be put off longer than this period. The tobacco, so generally deleterious to the insect tribe, is so also to this destructive fly, and thereby prevents its approach.

My first experiments with tobacco were confined to ten or twelve peach trees; the next spring I found that the trees still threw out gum near the surface, and I feared my experiment had failed; upon a close examination however, I perceived that the gum had issued out from the old wounds of the former year, which were not yet entirely healed. The last summer I again applied the tobacco, and this spring have assiduously examined the trees—upon the whole, I find that those trees which have enjoyed the benefits of the tobacco application for two years, have all their wounds entirely healed and thrown out no gum; and in no instance have I found the worm to have existed, when the tobacco was applied. From these facts, it is evident that tobacco stalks, when stripped of their leaves would be excellent to throw around the roots of fruit trees.

MECHANICKS.

FROM TILLOCH'S PHILOSOPHICAL MAGAZINE.

MR. PERKINS' STEAM ENGINE.

Mr. Perkin's invention is founded on a most valuable discovery—that water is capable of enduring an elevation of temperature even to a red heat, or perhaps an indefinite extent, by being subjected to a very high degree of pressure: which pressure, while it permits the expansion of the molecules of water *as a fluid*, prevents their further expansion, or the liquid assuming the *gaseous* form of steam.

Instead of the boiler of the ordinary engines, Mr. P. substitutes a cylinder, which he terms the *generator*. This cylinder is made of gun-metal, (the most tenacious and least liable to oxidation) of about three inches in thickness, closed at both ends, with a valve in the top, opening outwards; which valve is loaded with weights equal to the state of the pressure from the expansion of the heated water within. The cylinder is placed vertically in a cylindrical furnace; consequently it becomes surrounded on all sides with the fire, and soon acquires a temperature of 400° to 450° Farenheit. The production of steam is effected by an injecting pump, throwing in water at one part of the generator, which displaces through the valve an equal volume of hot water from the generator. This water, at 420°, passing into the induction or steam pipe, instantly expands into steam, communicates with the working cylinder, and gives motion to its piston, which is placed in a horizontal direction, for the more convenient application of its power to machinery. The reciprocal action of the piston opens and shuts the apertures of the *induction*, and *eduction* pipes, by means of rotary valves, as usual in some other engines. But the operation of generating and condensing the steam is effected so instantaneously by this engine, that the piston performs about two hundred strokes in a minute, when the engine is at full work. Indeed, considering the small extent of surface, the power of this engine is almost incredible, the generator containing only about eight gallons of water, and the working cylinder not exceeding two inches diameter, with a stroke of the piston about twelve inches in length. The piston rod gives motion to a crank and fly-wheel similar to other engines.

A most decided improvement also made by Mr. P. in condensing the steam under a very great degree of pressure, and at a temperature of about 320° and in this state returning it into the reservoir for the successive supply of the generator. In consequence of this economical arrangement, the space occupied by the engine with all its appurtenances, does not exceed an area of six feet by eight. The present model is calculated as equal to a ten horse power; and Mr. P. considers the whole of the apparatus of a sufficient size for a thirty horse engine; with the exception of the working cylinder and piston. The consumption of coal for this engine is within two bushels per day, when at full work.

All risk of accident is effectually provided against, by the following ingenious contrivance. It should be remembered, that owing to the small extent of surface exposed to the expansive force of the steam, and the latter being generated *only* in sufficient quantity for each succeeding stroke of the piston, there is much less liability to accident from this engine, than in most other high pressure engines. To prevent, however, the possibility of such an event, the induction pipe, in which the steam is produced, is calculated to withstand an internal force of 4000 pounds to the square inch, and it is also provided with a thin copper tube, which is calculated to burst at a pressure of 1000 pounds; while the pressure under which Mr. P. works the engine does not exceed 500 pounds on the square inch.

In order to demonstrate the perfect safety of the operation of this engine, notwithstanding this immense internal pressure, Mr. Perkins has on several occasions urged the power of the steam till it bursts open the sides of the copper tube, without occasioning the smallest risk, either to the spectator or to any other part of the apparatus. This mode of allowing the escape of the steam by rending open the sides of the ball, (which is made of a determinate strength) is probably superior in the certainty of its operation to any modification of safety valves.

It is also a very remarkable fact, that the steam which escapes in this case is not by any means of that elevated temperature which might have been expected from its prodigious expansive force. This fact seems to involve some points connected with the doctrine of latent heat, or the conversion of fluid into gaseous matter and *vice versa*, with which we are at present but very imperfectly acquainted. We understand Mr. P. is further engaged on some very important enquiries on this most intricate branch of natural philosophy.

We have not heard any comparative estimate of the price of Mr. P.'s engines, but we apprehend their original cost will be considerably lower than that of others; while they can be worked with one-tenth part of the fuel, and occupy only a fifth part of the space required for those of the low pressure construction. The latter point is one of the highest importance, in situations, where manufacturers are limited for room, as in the metropolis and other great towns.

The very superior economy of these engines over all others, not only in the consumption of fuel and water, but in the weight of materials, must also render them peculiarly adapted for locomotive engines; and we entertain little doubt that steam carriages will, ere another twenty years have elapsed, become as generally adopted among us as steam vessels are at the present. And when we take into consideration the immense saving in the consumption and tonnage of coals, we are of opinion that Mr. P.'s invention, will infinitely extend the use of the steam engine in navigation.

The following extract of a letter from a gentleman of this town, eminent for his scientifical attainments and mechanical skill, now in England, to his friend in this town, gives a more clear and satisfactory account than we have yet seen published, of Mr. Perkins' important invention. The letter is dated April 26.—*Boston Daily Adv.*

As many enquiries were made concerning Mr. Perkins' new steam engine, before I left Boston, without any satisfactory information being had, I will attempt to give you some account of it. Before I begin, however, you must free your mind from all notions of a common engine, and call his, what you please afterwards. I do not mean that Mr. Perkins' machine is not a steam engine, but that its operation is so essentially different, in its principle, from all other machines under that name heretofore known, that you must prepare for a great novelty, such an one as must, in a short period, throw out of use all the steam engines, on whatever principles hitherto made. I saw it on Monday last, the day after my arrival, being the first time he publickly exhibited it.

In the common machines, a great mass of water is made to boil violently in a strong iron or copper vessel, called a boiler, upon the surface of which water, thus boiling, is raised the steam, heated to a degree, and conveyed by pipes to the working cylinder, and thrown by opening and closing cocks, alternately upon the upper and lower side of the piston. In Mr. Perkins', nothing of this kind takes place, nor does the water even boil, nor is any steam produced except the engine is worked. He confines in a very strong vessel, a small quantity of water, keeping the vessel constantly full, which is heated to a very considerable degree. This vessel, corresponding to the old fashioned boiler, he calls the generator, and holds about seven gallons in the machine I saw working. It is of cast iron, or rather bell metal, about three inches thick, and is placed in another sheet iron vessel or case, which encloses it, leaving a space all round of eight inches. Within this case the generator stands on a grating, so as to admit of coal being placed under it and round the sides, perhaps two or three inches high. To work his engine all day, about a bushel of coal is necessary, and on removing the iron cover from a hole in the top of the enclosing vessel, I perceived no more fire than is often seen in a common parlour grate. The power of this engine is ten horses.

The cylinder in which the piston works, is horizontal; the piston is two inches diameter, having a stroke of twelve inches only. Near this cylinder stands the generator, which communicate with each other by means of a short strong pipe, so that the operating valve alternately closing and shutting, this communication is brought as near as possible to the cylinder. When this valve is opened in common engines the steam passes from the boiler to the piston; but in Mr. Perkins', nothing but water, immediately compressed by heat, is passed—and at the moment of passing, the small quantity which issues, bursts into steam with great power. This explosion of water (and I see no reason why it may not be so termed) immediately fills the space between the piston and one end of the cylinder, and drives the piston the whole length of the stroke. On alternating, this steam is condensed, and the same operation then takes place from the opposite end. A small pump is moved, to throw the exceedingly small quantity of water, resulting from the condensation of the steam, into the condenser; a strong iron vessel standing near the generator, from which it is forced by the same pump into the generator again, Such is the general description of Mr. Perkin's new engine. It has the power of ten horses, and Mr. Perkins offered to bet that he would make it do the work of a fifteen horse power. The whole machinery weighs probably, less than a ton, and he says his machines and whole apparatus for any power, say fifty horses, will weigh only about as much as the water alone in common engines of the same power. He is now building a steam-boat of three hundred tons, to have two engines of sixty horse power each, the cylinders of which will be only seven inches diameter, with a five foot stroke, and the whole work will be below deck, at the bow of the boat. It is strictly true, in principle, that when the engine is once filled, no additional water is required. But owing to some small quantity inevitably escaping through the joints of the tubes, &c. a small loss is sustained, which must be supplied by the pump: for this purpose he has a bucket of water ready. From the compact form, simplicity, lightness, and power of his machines, I see no reason why steam carriages should not, especially on good roads, in a very few years, supersede all other kinds of land carriage, and a mail coach soon be running between this place and Liverpool, at the rate of twenty or twenty-five miles an hour.

Another letter from London, dated April 24, and published in the Boston Daily Advertiser, communicates the following additional information respecting Perkins' Improved Steam Engine.

"You have probably heard of Mr. Perkins' new and important improvement of the Steam Engine—but as I have seen it in operation and have conversed with Mr. Perkins on the subject, I will merely mention the principle on which the improvement is founded. He was never able to account for the fact that the bottom of a copper vessel is burnt through even when kept full of water. It occurred to him at length, that whenever great heat is applied, there is always a large space, between the bottom and the water, occupied by steam, which acts as a non conductor.—His object then was to place the water under such pressure that it should be kept in contact with the bottom of the vessel; and that no room should be left for the admission of steam, and then, of course, all the caloric would be transmitted into the water. This he has effected, and a saving is made of nine-tenths of the fuel usually consumed. The water is raised to the temperature of 400 or more degrees of Farenheit, and on its escape from the boiler is converted into steam.—This system unites the two objects which were wanting to render the steam engine useful on long voyages. It is worked with so little fuel that it will be no inconvenience to carry enough for the longest voyages—and the machine occupies but one tenth part of the space of the old ones. Indeed one vessel is now preparing to sail for India with an engine of this construction of sixty horse power.

"It is said that Mr. P. has had great offers made him for rights to use his invention. He offers to make engines at half the price of Watt and Bolton, and demands only one third of the value of the savings in fuel. One singular fact is observed, viz. that the higher the temperature of the water is, the lower is that of the steam—That of boiling water, at a certain distance, scalds—that of water at a temperature of 400 degrees at the same distance is merely tepid. It is explained on the principle of its extreme expansion. Perkins thinks he could raise the water to so high a temperature, that the steam would be converted into *snow*. He is certainly playing strange tricks with his mechanics. A great number of lords and ladies have been to see his workshop—and the *savans*, among others Mr. Wollaston and Sir Humphrey Davy, though at first incredulous, are now satisfied of the truth of his pretensions. The Marquis of —— told him he would engage to go to America with him, if he would carry him in 15 days—Perkins told him he thought he could do it in something less. People amuse themselves in speculations of what changes are to be produced by this invention—sails and rigging of course will be laid aside, and people expect soon to see a steam engine travelling along the roads instead of horses—and as the explosive power of steam can be made greater than that of gunpowder, the same power which moves the cannon, may discharge the balls, and all the batteries may be converted into flying artillery. Mons. Gautler (a nephew of the balloon man) carries his views still higher and suggests that a small engine might be found very useful in giving direction to balloons, by operating on something in the shape of wings!"

FOR THE AMERICAN FARMER.

METEOROLOGY.

MR. SRINNER,

As in our very dry seasons, the most of your readers are watching the winds and the signs, as they are termed, for rain. I have thought the following translation from a French work, called "Erreurs et Préjugés," might be acceptable to them.

"The Abbé Toaldo has demonstrated that in 1106 new moons, 950 have been followed by remarkable changes of weather. There are then 950 chances to 156, or what is the same thing, six to one that a new moon will produce a change of weather. The other phases have less influence. The full moon gives but five chances to one. The first and last quarters give but two and a half to one."

MARYLAND AGRICULTURAL SOCIETY.

Baltimore, June 23, 1823.

At an adjourned special meeting, in pursuance of notice given, of the members of the Maryland Agricultural Society, R. Smith, Esq. in the chair, and James Howard, Esq. Secretary, held in the city of Baltimore, on the 23d June, 1823, the following proceedings were approved and adopted:

Resolved, that the Articles of Association of "The Maryland Agricultural Society," be amended according to the following form, and that the same so amended, be and hereby are adopted as the constitution of the said society.

ARTICLES OF ASSOCIATION OF THE MARYLAND AGRICULTURAL SOCIETY.

We the subscribers do hereby agree to associate ourselves under the style and title of

"*The Maryland Agricultural Society.*"

Art. I. The object of this association is the promotion of Agriculture, and Rural Economy.

Art. II. The officers of this society, shall be a President, a Vice President, a Recording Secretary, a Corresponding Secretary, an Assistant Recording Secretary, a Professor of Agricultural Chymistry, a Treasurer, an Assistant Treasurer, and two Collectors—one for each Shore, twenty-four Trustees, and such other officers as the by-laws of the Society shall from time to time direct. All officers, where not otherwise directed, shall be chosen by ballot, to serve until the close of the next exhibition, and then and thereafter be annually elected at the meeting held on the Western Shore. in the month of November.

Art. III. The duty of the President shall be to preside at all meetings, to direct such correspondence as may be necessary, to superintend the affairs of the Society, and to make such communications as from time to time may be deemed useful.

Art. IV. The Vice President in case of the absence of the President shall fulfil his duties; and in case of the absence, death, or resignation of any officer, the Society shall have power to appoint in his place a member to act until the appearance of such absent officer, or in case of death or resignation, until another officer shall be duly elected.

Art. V. Twenty-four trustees shall be elected, of whom twelve shall be from the Western Shore, and twelve shall be from the Eastern Shore. They shall meet as often as their respective chairmen, or any two members may deem it necessary, and any three members shall constitute a quorum. The trustees shall from time to time examine in person the management and condition of such farms as they may consider objects worthy of their attention; and they shall make report to the society of such as may merit their approbation. They shall severally take charge of all the property and articles of the Society, on their respective Shores; the books and papers of the other departments excepted. It shall be their duty to take the most efficient measures for collecting and distributing the best samples of all the useful grains, roots, and seeds; for collecting all native fossils, marls, earth or substances, proper for manures; for causing the same to be analysed, and report the results to the society; for procuring experiments, to be made by careful agriculturists, of all such fossils, marls, earth or substances; for collecting models of the best agricultural implements, and to report their properties and usefulness: to designate from time to time all subjects and objects for which premiums should be offered, and to fix and declare the several premiums for the same; to appoint committees to examine into the merits of, and report on all claims for premiums; to designate the time, and make the requisite preparatory arrangements every year for the meeting of the Society, and to keep regular minutes of all their proceedings.

Art. VI. The Assistant Secretary, the Assistant Treasurer, and the twelve Trustees for the Eastern Shore of Maryland, shall be chosen at a meeting to be called on that shore, by the Vice President, and, when so chosen, shall serve until the close of the next exhibition on the Eastern Shore; and the Trustees for said shore, shall then and thereafter be chosen annually.

Art. VII. The first Exhibition of the Society shall be on the Western Shore, on the first Wednesday in November next. The next Exhibition of the Society shall be on the Eastern Shore on such day thereafter as may be designated by the Trustees hereafter to be chosen on that shore.

Art. VIII. The Society shall have power to make such bye-laws and regulations, as they shall from time to time deem necessary for carrying into effect the objects of the institution.

Art. IX. Every member on joining this association, shall pay to the treasurer, or to the assistant treasurer, a sum not less than two dollars, and shall annually thereafter in the month of November, pay a sum not less than two dollars, so long as he may continue to be a member of said Society.

Art. X. All expenses incurred in the procuring of premiums to be distributed by the Society, at their meeting on the Western Shore, and all expenses incurred by the trustees in the preparatory arrangements for such meeting or otherwise, shall be paid by the treasurer, under an order signed by the President. and countersigned by the Corresponding Secretary; and all expenses incurred on the Eastern Shore for premiums or otherwise as aforesaid, shall be paid by the Assistant Treasurer, under an order signed by the Vice President, and countersigned by the Assistant Recording Secretary.

Art. XI. At every meeting of the Society, the President or the Vice President, if attending, shall with the members present form a Quorum.

Art. XII. The Society shall consist of inhabitants of the State of Maryland, and of the District of Columbia, friendly to agriculture; and provision shall be made for the election and admission of honorary members.

The foregoing amended Constitution having been unanimously approved and adopted, it was ordered to be published in the American Farmer; and the meeting then agreed to adjourn to Friday, the 18th day of July, when they would meet again at Baltimore, to choose the general officers of the Society, the Trustees, &c. for the Western Shore.

R. SMITH, *President.*

JAMES HOWARD, *Secretary.*

THE FARMER.

BALTIMORE, FRIDAY, JULY 4, 1823.

☞ Is it not wonderful, that to this hour, intelligent farmers should be obstinately divided in opinion about the *origin of cheat?* One would suppose that a question so susceptible of demonstration, and so immediately and much connected with their interests would have been fully settled. For the next paper, we have sent to the Printer a letter, wherein the writer states that he has "*twenty acres turned to cheat* this year." Is there in all the circle of arts, in all the variety of men's business, an instance of such indolence in not clearing off all doubt in regard to an evil of such extent? Will not agricultural schools and professorships, connected with pattern farms, diffuse skill and science amongst agriculturists, as our admirable military academy preserves and distributes the *art of war?* But man in the boasted superiority and perfection of *his* nature, has ever been most ingenious in the arts of destruction!!

☞ The Editor was absent when the last number of the Farmer was published, until nearly the whole impression was stricken off—the Editorial observations on Usury laws, abound in errors of the press, "too tedious to enumerate."

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7—sales—White wheat, $1 42 to 1 50—Red do. $1 42 to $1 43—Rye, 75 cents—Corn, 50 to 52 cents—country Oats, 40 cents—Beef, 8 cts. per lb—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Buckwheat, $1 50—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 34 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $2 75 per bbl.—No. 2, $2 50—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 12 cts per lb.—Eggs, 12½ cts. per doz.—Hay, $18 per ton—Straw, $9.

MARYLAND TOBACCO, Red, has improved from $1 to $2 per hundred.

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE, TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

No. VII.

Further substantial evidence of the ample sufficiency, in general, of ten thousand dollars *a mile to open a Canal competent for Boat navigation.*

52. By the "Fourth Annual Report of the Board of Public Works of Virginia;" page 84 of the principal Engineer's Report, it appears that in estimating the cost of the James' River Canal, it was divided into four sections, the distance of each in miles; the average cost per mile; the surplus, that would be remaining, at the same rate, out of an appropriation of one million of dollars, for 100 miles of Canal; and the rate per cent, at which that surplus would accrue in proportion to the estimated cost, as they have been carefully collected, and calculated, from the Report above mentioned, may be clearly exhibited in one distinct view, as follows:

No of sect'n	Miles of distance	Aver. cost per mile	$ saved in 100 miles	Rate per cent sav'd
1	24½	$ 6560	$344,000	34
2	120½	5730	427,000	43
3	85	8100	190,000	19
4	19	12659		
Total	249	7154	284,600	28

53. The lockage reported in this instance is 1152 feet and a half, at $625 per foot except 47 feet and a half in the first section at $1000. The estimated cost of the whole 249 miles of Canal is $1,781,419 that is at the rate of $7154 per mile, and a saving of 28 per cent. as above stated.

The cost of the Potomac Canal, was estimated in five sections, as appears by the Commissioner's Official Report, transmitted by the governor, to the Assembly of Maryland, January 1, 1823, pages 77 to 84; a similar view of which is presented as follows:

No of sect'n	Miles of distance	Aver. cost per mile	$ saved in 100 miles	Rate per cent sav'd
1	54½	$7,711	$228,900	23
2	33½	8,055	194,500	19
3	38¾	8,483	151,700	15
4	46¼	7,499	250,100	25
5	9	23,702		
Total	182	8,676	132,400	13

54. Upon this occasion 487 feet of Lockage are estimated at $650, except 62 feet in the last section, at $750. The whole cost is estimated at $1,578,954 for 182 miles. The greater cost, and less saving, upon this route than upon that of James' River, appear to be owing to the great difficulties that must, of course, be encountered in opening a Canal along the narrow, rocky ravine of the Potomac, through the South mountain, and also around the Great and Little Falls, near to tide water, where, in a distance of only 9 miles, it is stated, that the Lockage required, is no less than 102 feet, that is no less than one fourth part of the whole estimated Lockage, in a Canal of 100 miles, between Baltimore and the Susquehanna. And as it may fairly and rationally be presumed, that no such difficult situations exist upon this last route, so the presumption is equally fair and rational, that in this direction, the *cost will be less*, and *the saving greater*, than upon the Potomac route, provided it shall be found practicable to bring the required supply of water over or through the summit level in an eligible situation, which is an important desideratum, to be determined by the survey and levelling, now about to be commenced.

55. Again, agreeably to Niles' Weekly Register, Vol. No. 22, page 275, the Housatonick Canal, in New England, will be 66 miles long, the ascent 604 feet, and the supply of water abundant, the whole cost of which, is estimated at $699,400. This, I perceive, exceeds ten thousand dollars a mile—and I also very plainly perceive the reason of it. The ascent is 604 feet; whereas, at 4 feet in the mile, the estimated rise and fall in the proposed route to the Susquehanna, the Lockage would be only 264 feet in 66 miles. Consequently, if 264 feet be taken from 604 feet, the excess is 340 feet, which at $625, the lowest estimated cost per foot, the amount is $212,500. This sum being deducted from $699,400 the estimated cost, and the remainder divided by 66 miles, the distance, the quotient is $7377 per mile. were it not on account of the excessive Lockage. At this rate, the saving, out of a million of dollars, for 100 miles, would be $262,300, that is upwards of 26 per cent. upon the required proportion of the original estimate.

56. The foregoing estimate has reminded me of a small omission in my last number. In the calculation of the amount of saving (50) *agreeably to the test of experience*, upon the Canals of New York, no notice was taken of the Lockage there, that is 661 feet in the Erie Canal of 353 miles, being less in proportion, than the estimated rise and fall of 400 feet in 100 miles. Instead of 400, there should be only 187 feet at the rate of 661 feet in 353 miles. Hence the excess is 213 feet, the amount of which, at $625 per foot is $133,125 for extra Lockage. But according to information that I have since received from one of our Susquehanna Canal Commissioners, for only 20 per cent. to be saved, in consequence of the incalculable advantages derived from experience, is too low. I am told that these advantages were estimated by a superintendent, in the business, who was very capable of forming a very correct opinion, at thirty three and a third per cent. That I may be certain, however, not to exceed the reality, let 25 per cent. be adopted, which rate being deducted from $7,603,386, and $764,000 from the remainder, then by adding the above $133,125 for extra Lockage we obtain $5,071,665 for the cost of 782 miles, as before (50) of Canal, competent for Boat navigation, that is $6473 per mile, equal to a saving of $352,700, or 35 per cent. out of an appropriation of a million of dollars for 100 miles. The difference between 4 feet, and nearly 3 feet Lockage, on the Potomac route, and upwards of 4 and a half on the James' River, are both deemed too small to be made particular subjects of calculation.

57. The Canal of Languedoc, in France, called, also, the Canal of the two seas, is stated in the French Encyclopedia, to be 64 leagues, 192 miles in length, and to have cost 25 millions of livers, valued according to the period when work was prepared for publication. Computing 16 livers, as being equal to $3 the cost of 192 miles, was $4,687,500, that is, $24,414 per mile. From other authorities, it appears that the summit level of this stupendous Canal, is about 600 feet above the two waters, between which, it forms a communication; that under the patronage of Louis XIV. who furnished more than half the money expended upon it—it was *begun*, and *finished* in 16 years; that it is 6 feet deep, and 144 wide, including the towing paths, and a water line of 60 feet. Hence, its width in the bottom, allowing 18 inches base on each side, to one foot rise, would be 42 feet, and the excavation in every yard of distance, 34 cubic yards; so that by proportion, 34 cubic yards: are to 8:: as $24,414: are to $5745, including every expense at that rate, for a Canal of 24 feet water line, and 4 deep, as before mentioned.

58. Again, the Holstein Canal, begun in 1777, and finished in 1785, is stated in the New Edinburg Encyclopedia, Article Navigation Inland, page 360, to extend about 50 miles. Its water line is said to be 100 feet, bottom 54, and depth not less than 10 in any part. The whole Expense of this ship navigation, where vessels drawing 9 feet 4 inches water, pass through between the Baltic and the German Ocean; and from two to three thousand ships have passed in one year, was a little more than a million and a half of dollars, that is $30,000 per mile. According to the above dimensions, each yard in length would contain 85 cubic yards of excavation, which: are to 8 cubic yards:: as $30,000 per mile: are to $2824. I consider it probable that this low amount may be owing to there being but little, if any Lockage in this instance, and if so, $3000 being added for 4 feet Lockage, at $750 per foot, will produce, for the cost of a Canal, competent for Boat navigation, $5284 per mile, at that rate, a sum nearly agreeing with several of the foregoing calculations.

59. Evidence of a similar nature, might be added to a much greater extent; but more appears to be unnecessary. From that which has already been offered, it is evident 1153 miles of Canal have been located, and about one half of it has also been made, as follows: the cost of the large Canals being reduced to the proposed size of 24 feet surface and 4 feet deep:

Paragraph	Miles of distance	Aver. cost per mile	$ saved in 100 miles	Rate per cent sav'd
52	249	$7,154	284,600	28
53	182	8,676	132,400	13
55	66	7,377	262,300	26
56	414	6,473	352,700	35
57	192	5,745	425,500	42
58	50	5,284	471,600	47
Total	1153	6,760	324,000	32

60. Thus it is evident that out of sixteen items of calculation there are only two, and out of 1153 only 28 miles in which the cost has been recognized to exceed $10,000 per mile. Owing to 221 feet of lockage being required in the last 19 miles of the James' River route, that is nearly 12 feet in the mile instead of 4, the excess is 8 feet, the cost of which at $625 per foot, is $5,000, and this being taken from $12,659 leaves $7,659 for the cost per mile, exclusive of the extra lockage—which is equivalent to a saving of 234,100, or nearly 23 and a half per cent, out of a million of dollars for 100 miles. Thus, there are now only nine miles out of 1153, which constitute any exception to the entire sufficiency of $10,000 a mile; and in consequence of these 9 miles including 102 feet of lockage, (54) and otherwise presenting difficulties that are believed to be of a more formidable character than any that will probably be presented upon the other contemplated routes in Maryland, this last exception, also, completely vanishes from before us.

61. Thus it is evident that the popular conjecture of *twenty millions of dollars* being required to open the Erie canal of New-York, was the

mere whim of uninformed minds. Thus, also, the wild ideas of 100 miles of canal between Baltimore and the Susquehanna, costing six, eight, or ten millions; of its being an enormous undertaking, beyond the reach of Maryland to accomplish; that if possible, at all, it would require the sale of our city to carry it into effect, are *whims still more idle and extravagant*—whims, by which those who imbibe and indulge them, *swell into mountains*, expenditures and difficulties, that, when correctly understood, are but as *mole-hills*, in comparison.

62. It is now nearly 40 years since I knew an instance of a young man, who had then lately completed his education at school; or, as the common expression is, *who had gone through the assistant*, being closely questioned by an old man, in relation to his learning, and in particular whether he was well acquainted with vulgar fractions. These inquiries were so managed as to apprise the youth that a question was about to be proposed to him, and to make him believe it would be extremely difficult. It was briefly this: *How much is the third and half third of three pence?* Supposing that it must at least require an operation, such as was usual in the addition of fractions, the student, without making the least effort to discover the answer, modestly answered, *if he had a slate and pencil he thought he could work it.* But, how extremely was he afterwards mortified, when he came to reflect, that neither slate nor pencil was at all necessary; that the third of three pence being a penny, and the half of a penny a half penny, the answer was a penny-half-penny.

63. Thus, this young man, though very capable of having answered the old man's question with the greatest facility, was completely deterred from making the least effort, merely by imagining a great difficulty, where, in fact, there was none. May then the citizens of Maryland no longer hesitate to prosecute with energy a canal to the Susquehanna. May they remember that the third and half-third of three pence is easily told; and also that the evidence in favour of the ample sufficiency of one million of dollars to accomplish the object, has been shown to be abundant, *without a single instance of exception remaining; all the mistaken and extravagant conjectures of inexperience to the contrary in any wise notwithstanding.*

WM. KENWORTHY.

FOR THE AMERICAN FARMER.

TO THE CITIZENS OF THE STATE OF MARYLAND.

My Fellow Citizens,

The subject of Internal Improvements—of improvements in Agriculture and in the arts auxiliary to its prosperity, especially in making canals, railways, and other roads for diminishing the expense of conveying its productions to market and bringing back its returns, so as to leave to the farmer a profit on his labour larger than that which he now enjoys, has, for a few years past, been pressed upon our attention; and it is a subject worthy of our most serious consideration.

When my letter to Clement Dorsey, on this interesting subject was published in the American Farmer, (vol. 4, pages 19, 20,) I intended to present to your view some further reflections—but my engagements in executing a part of the *new* canal near Richmond, in Virginia, and some other imperative duties, have so fully occupied my time, as not to leave it in my power, until now, to pursue the theme.

The gigantic strides, the rapid march of the state of New York toward wealth, power and happiness; the efforts of Virginia on one side of us, and of Pennsylvania on the other, to appropriate, each to herself, the trade of a large portion of the Western country, speaka language which we cannot misunderstand, and which we ought not to disregard. Were we to blame them, we should be wanting in magnanimity—yet, while we admire and applaud their enterprising spirit, let us avail ourselves of *our own* advantages, and not, by neglecting the auspicious moment, suffer them to pass from us, or be greatly diminished in value. Nature offers to *our* acceptance, the *cheapest** and *most easy* communication with the Western Country, by means of the Potomac and Youghiogany rivers and their tributary streams. We have the advantage of our immediate neighbours, in our location and the facilities for a cheap and profitable intercourse. Nature and the enterprising spirit of her own citizens, have given to New York, beyond competition, in addition to her own internal trade, which is very rich, the trade of St. Lawrence river, that of an immense extent of Lake-shores, and of the northern part of the states of Ohio, Indiana, and Illinois, as far as the ridge separating the waters which flow into the Lakes from those which flow into the Ohio and Mississippi rivers, but this ridge should be *her southern limit.* If we be not wanting to ourselves, we can meet her *here*, and say to her "Hitherto shalt thou come but no further"—south of this boundary is ours. New York has indeed taken the lead in this glorious *race* of Internal Improvement, but let us not suffer ourselves to be so far *eclipsed* by her as to be discouraged and lose our energies, let us rather emulate her and profit by her example. Respecting the Potomac, as a channel of commercial intercourse and as a powerful bond of union between the Eastern and Western countries, the pen has been several times dexterously wielded by various hands, yet so important is the subject, and so fruitful in highly interesting considerations, that it is by no means exhausted.

Since the commencement of operations, in the year 1817, in making the great Erie-canal, my continual employment, as civil engineer, on objects of improvement in inland navigation, in the states of New York and Virginia, has afforded me abundant opportunities of becoming acquainted as far as my capacity would admit, with this great subject, in its various important bearings—in theory and practice: And it has been my favourite study. I may therefore be permitted to add my mite.

Look at the map of the middle states—see the noble Susquehanna, with her widely spreading arms—See the Potomac pointing to the *West.* Both discharge their waters through *our* state, and their wealth will naturally flow through the same channels, if the proper improvements be made. The *former* river drains the southern border of New York and the middle parts of Pennsylvania, and Maryland has exclusive jurisdiction over a few miles at or near its mouth—the *latter* may be easily connected, *in continual navigation*, with rivers which drain the south-western parts of New York, the western parts of Pennsylvania, the northern parts of Virginia, most of the states of Ohio, Kentucky, Indiana, Illinois, &c., and Maryland has, with Virginia, concurrent jurisdiction over its whole extent from its source to its mouth, except about ten miles, over which the United States have exclusive jurisdiction. The improvements which may be made, and which ought to be made on both these rivers are, therefore, highly interesting to us—but those on the Potomac are, in my estimation, vastly the most so, as I hope will plainly appear from the considerations I shall be able to present.

We may realize, from these improvements, benefits beyond the expectations of even the most sanguine—they will be not only possible, but easily practicable, if we be united—if we act in unison; but if we be so unwise as to suffer sectional jealousies to predominate, one section or part to be set in array against another, as if their interests were hostile, all our plans may fail. Many a noble scheme has been ruined in this way; and, as it respects public improvement, no principle can be more fallacious. Each proposed improvement will afford *positive benefit* to *every* part or section, although some *one* part may be benefited *more* than the others—the truth of this is proved by the history of every commercial town and city, and of every adjacent country. Let us, for the sake of illustration, suppose a state to consist of three parts or sections, which we will designate by A, B, and C—and that three different plans of improvement are proposed, all good plans, and fraught with important benefits to the whole state, and each yielding advantages, in a greater or less degree, to every one of the parts A, B and C—but, as it almost always happens in practice, the first plan is calculated to benefit A in a much greater degree than it will B or C—in the spirit of jealousy, they consider it and treat it as an injury, oppose it, and, being the majority, defeat it; the second plan is calculated to benefit B much more than it will A or C—they in like manner, treat it as an injury to them, combine against it, and defeat it; and the third plan, being calculated to benefit C most, is defeated by A and B, in the same way, and by the same process of *feeling* rather than of *reasoning*. Neither will accept of even positive wealth, by any plan, which he fears will give to his neighbor still greater wealth. Such is the spirit of jealousy, and where it reigns paramount, it never fails to keep a state weak and poor. How much more noble and magnanimous it is, to cast from our view exclusive advantages to *particular parts*, and, with a steady aim, to pursue only the *general* good; and such, I trust, will be our course.

Agriculture is, beyond all question, our *primary* interest. *Three-fourths*, at least, of the population of Maryland are cultivators of the soil—the remaining *fourth* pursue Commerce and the Mechanic Arts. These are indeed auxiliary to agriculture, and necessary to its prosperity, and ought to have their *just share* of legislative patronage: but agriculture is paramount—the first and noblest of arts, and the parent and nurse of all others. It ought not to be under the control of minor interests. I therefore address myself principally to farmers and planters,—you, who cultivate the soil—you are the strength and sinews of the state,—you ought to be, according to your importance, independent, to give tone to secondary interests, instead of being governed by them. Exercise your right of suffrage, at the ensuing election, judiciously and independently; and then you will infuse your spirit into the next legislature.

Take into your serious consideration, the subject of the contemplated connexion, for commercial intercourse, between the Eastern and Western country, by a navigable canal along the valley of the Potomac river. In consequence of the long and narrow form of Maryland, this proposed improvement will bring almost to our very doors the cheapest, safest, and most perfect of all possible modes of conveying our produce to market and of bringing home its returns. It will present to our choice more than one market—it will present a number of markets in active competition with each other, which, while it will be a positive benefit to each commercial city and town, will, by making each a better market, yield incalculable advantage to, and establish the predominance of the agricultural interest. The western parts of Pennsylvania, the northern parts of Virginia, the rich state of Ohio, &c. &c. by making this their channel of commerce, will pour countless treasures into the lap of Maryland, and, at the same time, enrich themselves; for the benefits of commerce must be *reciprocal*, otherwise it cannot flourish, and will soon cease to exist. It is just so with agriculture, commerce and manufactures; unless they cherish and support each other, in honest and harmonious *reciprocity*, instead of each endeavouring to overreach and take advantage of the others, neither can long prosper. Let us do our part toward making the proposed improvement. It requires from us nothing beyond what a willing and industrious people can do without difficulty, and nothing but what a wise people will see it their best interest to do. From Pittsburg to Washington City and Baltimore, the whole line of canal will be a chain of beautiful and flourishing villages. We have not yet *fully* considered these things, but enquiry is awakened; before the next election we will understand the subject, and when we do, if we do not act rightly the fault will be our own.

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* *On this point, the comparative advantages of the Potomac route, see an excellent Essay, in two numbers, with the signature "Lookers-on," from the pen of our late lamented friend THOMAS MOORE, published in the National Intelligencer and in the American Farmer—see particularly, page 412 of the American Farmer, Vol. 3.*

Permit me to say a few words more on the advantages of several markets in competition with each other. Where the cultivators of the soil have *but one* great commercial market, the *mercantile* interest acquires too much influence over the *agricultural*—the less over the greater. This injurious influence tends to paralyse and chill the spirit and energies of agriculture, and to destroy that fair reciprocity which is essential to the prosperity of *both* interests. Among farmers, individual competition operates in its fullest extent; among merchants of the same city or town, individual competition is easily controlled and regulated by combinations; this circumstance gives to the latter a great advantage over the former. Let the farmer have a choice of markets so nearly equal in magnitude as to be rivals for his custom, his condition is thereby vastly meliorated; both markets are rendered better for him, and he stands on ground comparatively independent. Even those, who, from their proximity to one market, never contemplate using any other, will find *that one which they do use* a better market in consequence of the competition.

The proposed improvement, it is true, would place one market, and probably a considerable one, in the District of Columbia, and, technically speaking, this is *not in the state of Maryland*—but it is *technically only* that the District is *foreign*. Its inhabitants have *Maryland-feelings*—separated from us only *in name*, they have, with us, identity of interests, and are our brethren still. But admitting this to be a foreign market, which essentially it is not, how would that circumstance affect our interests? If we can sell our produce there for a better price than we can obtain elsewhere (otherwise we will not go there) and bring thence a greater value home, is not the advantage ours? This is precisely the argument we use to prove that foreign trade is profitable, our receiving a greater value in exchange for a less. Let us not be deceived—fine-spun logic may puzzle and betray us into obscurity and error—but plain common sense will not mislead us. It is our true interest to encourage, in connexion with the main canal, every lateral one, on which nature has not placed insurmountable difficulties. No one place should be a *favorite*, but all should have equal privileges, and in every measure the leading object should be the *general good*.

I have heard it alleged, by some of my neighbors, as, on their part, an objection to the proposed canal, that, if the friends of that project be correct in their estimates of the cheapness of conveyance, it will place those who come 100 miles by the canal on a par with those who have only 5 miles of land carriage; and those (say they) who have to encounter the expense of a greater distance than five miles of land carriage will be undersold, and, by the reduction of prices generally, be placed in a condition much worse than their present one. This apprehension is altogether chimerical.—Its assumptions are contradicted by the history of the rise and progress of every commercial city; for instance, New York, Philadelphia, Baltimore, &c. &c. Prices are regulated universally by *demand* and *supply*, and they advance or recede, *with equal step*, or with very moderate vibrations.

By the operation of the contemplated canal, a vast amount of capital in wagons and horses will be set free for a more profitable investment—to promote and extend agriculture—to increase its products—and to enable the country to maintain in comfort, a greater population than is posssible under the present state of things, by appropriating to the support of *man* what is now necessary for the sustenance of *horses*, which would be rendered supernumerary.

If I shall have time and opportunity, it is my intention to pursue this very interesting subject, and to submit for your consideration some of my views and reflections on the following topics:

1. The probable cost of a canal from Cumberland to the line of the District of Columbia—making the most liberal allowances in every doubtful case.

2. The probable amount of tonnage that would pass—and the profit it would yield on the stock—the benefits to agriculture, arising from the saving in the expense of transportation, and from the many new productions becoming profitable, which the farmer cannot now cultivate without loss, on account of the heavy cost of conveyance to market.

3. An enquiry, whether in her present circumstances, it would be *wise and prudent* for the state of Maryland *to take stock*—and to what amount—or *simply* to grant a charter.

4. The probable amount of capital in wagons and horses, set free.

5. Objections answered more extensively and particularly than the present number would permit: and if any have objections not yet stated, I invite them to come forward and propose them. Where candour regulates the debate, truth is always promoted and knowledge extended by discussion.

I shall be glad if the hints I have given, put in motion other pens. The field is large, and much, very much of it remains unoccupied.

ISAAC BRIGGS.

Sandy Spring, Md.
7 Mo. 1st., 1823.

AGRICULTURE.

TO THE EDITOR OF THE AMERICAN FARMER.

HESSIAN FLY, CLOVER, CHEAT, &c.

Fairfax County, 28*th June*, 1823.

Sir,

I am just closing a wretched harvest, which, until the last week in April, gave me the hope of a very abundant one. This as far as report may be credited, is the case through a great part of Virginia—believing, sir, that much good may result from a free communication, through your useful paper, touching any matter directly or remotely relating to this destructive and ruinous insect, I shall proceed to give you an account of my preparation for a crop, and its results—150 acres of land was cultivated in corn, which produced a good crop of that grain; about the 12th of September, I commenced seeding wheat among the corn, and continued until the 26th, when believing that the corn was dry enough to cut and stack, I proceeded to do so, and then had more command of the surface of the earth—my wheat was all seeded by the 8th of October, and came up well and grew with great vigour; the winter made little or no injurious impression upon it, and until the last week in April it promised well; it then became very pale, and began to disappear, upon the thinnest spots particularly, where those places were dry and elevated. Upon the last of May I did not think the crop worth any thing, and verily believe I should have pastured it, but for some good Rye which was within the same enclosure, and the hope I had of the young clover—March and April were very wet; the weather then became dry, and we had but two very light rains from that till harvest; these rains brought up a surprising quantity of small wheat upon manure land. The first thirty acres of this field which was seeded has produced very little more than the seed—that which was seeded after cutting the corn and stacking it, recovered from the attack of the fly, better than any other part of the field.—Since the year 1815 I had failed entirely in my clover, without one exception, though I seeded one hundred and fifty to two hundred acres every year, and gave it a dressing of plaster—I this year seeded my clover upon fresh ploughed land, as fast as it was laid down in wheat, and gave it a dressing of plaster in the Spring; it now looks well, and I have no doubt of its success, and believe that Autumn is the best and only proper time for seeding it. An opinion has become very prevalent that land would *tire* of clover—and plaster was worse than nothing as a dressing; from 1800 to 1815, I had sowed clover and plaster with great liberality without a single failure; since that I have entirely failed, having used as much as eight hundred and one thousand bushels of plaster a year, and upon a part of my farm, ploughed in the clover produced; the abrupt and sudden failure afterwards gave occasion to nice discriminators and philosophers to conclude *positively* that the land had *tired*—In England, it is said, that land has tired of the production of clover, and it may be so; but is clover the natural grass of that land? Let me ask in the name of our injured and impoverished land, that gentlemen would re-consider this opinion, and commence by seeding their clover in the fall, and with it as many Timothy or Orchard grass seeds as they can obtain—grass roots, like animals, will be regulated by the food within their reach. The cost is nothing—the succeeding crop will pay one hundred per cent. upon money thus expended.

I had also a fallow field of sixty acres, all of which was well broken up with a good three horse plough, twenty of which, because of a grass called Couch or Twich, was crossed with the plough, and well harrowed, and then seeded with Freeborn's one horse plough. Forty acres were well harrowed two or three times and then seeded—the whole came up well and looked very fine until the last of April; the 20 acre lot is cut and may produce eight or ten bushels to the acre—the forty acres all *degenerated* or *changed* into *cheat*, and I have cut it for rack food for my horses—the whole sixty acres is good land, the best produced most cheat—I should not fear making three hundred or three hundred and fifty bushels of corn upon it.

Your's,
A VIRGINIAN of F. County.

TO THE EDITOR OF THE AMERICAN FARMER.

VINES.

Oaklay Farm, *June* 18, 1823.

JOHN S. SKINNER, ESQ.

Dear Sir,

I have just been in my little vineyard, witnessing a repetition of the disappointment which has constantly attended my culture of the vine—my grapes are rotting by hundreds of bunches. I know the same fate has followed, even in more favourable soils than mine, the like attempts with us here, and as it is a disease not noticed by any of your correspondents on the "culture of the vine," I should be obliged to Mr. Adlum or some of your successful vignerons, could they point out the probable cause and best remedy.

It is about ten years since I began to attend to the vine, and have persevered with diligence and patience, but with little success. I have three fourths of an acre in vine, and yet do not get grapes enough for my table. My soil is, I believe, not very favourable, being thin, and bottomed on stiff clay; this it has been endeavoured to remedy with manure, deep ploughing, and digging round the vines with a three pronged hoe. I have tried raising vines from cuttings, with one, two, three and four eyes, and have taken the pains of pursuing the Madeira practice, of digging a trench five feet wide and two deep, and covering in it cuttings four and five feet long—in all which ways, except the last, they have grown well, borne in due time abundantly; but rotted equally. I have grafted on our native grapes without benefit; my vines have been pruned according to rule, and not permitted to bear until the fourth year. They have been pruned close, and the heads kept near the ground. They have been trained on espaliers six feet from the ground—they have rotted alike, and out of twelve different kinds of grapes, I have only two, (the white Malaga and Muscat-rouge) that I ever get any from.

The disease which destroys my grapes is certainly not an insect. Many of my grapes are injured by a curculio that attacks the berry, and a caterpillar that feeds on the leaf, but they are nothing in comparison to the rot, which may well be termed a blast from its sudden extensive destruction; for I am sure there has been upwards of two thousand bunches blasted in one night. Its first appearance on the grape is like a blister arising from a scald, and is only skin deep; the berries then gradually turn brown and rot, sometimes a few at a time, sometimes entire clusters rot at once.

The white Malaga and Muscat-rouge rot a little, but triflingly in comparison with the rest—they fail sometimes by not ripening in autumn, but shrivel up green and insipid: they are, however, my most certain grape, and I am extending their stock. They are not shewing at present any rot—but the black Hamburgh, Meunier, Sauvignion (a delightful grape brought by the late Gen. Davie, from France) white and black Sweetwater, Madeira grape, &c. are all rotting as usual.

I have one fine black Hamburgh vine, extending thirty or forty feet along the eaves of my piazza, about fifteen feet from the ground, and although the grapes on it do rot in some degree, it ripens much more than fifty vines of the same kind do in my vineyard, believing it probably owing to the height at which they hang, and knowing that in parts of Italy they train their vines to trees. I cut down some small trees last autumn, lopped off the limbs two feet from the stems, fixed them up near to some black Hamburghs, and trained the vine up about fifteen feet high; as yet, although many of the lower bunches are rotting, the higher ones are still sound.

The interest you are taking in this subject, as well as our other agricultural concerns, for it ought to become an agricultural one, has induced me to trouble you with the foregoing sketch, in hopes you may be able to obtain me some information in point.

One of your correspondents complains that his strawberry plants grow well, but give him no fruit. Many years ago some fine Chili plants were given me, and were cultivated a foot a part with the utmost care; they grew most luxuriantly, blossomed abundantly, but did not give me a single berry. After three years of disappointment, the bed was neglected, from believing it was filled with male plants, and became over run with grass. The next year, to my surprise, it was loaded with fine large strawberries, and in that state continued in full bearing many years. The same thing nearly has occurred to me here. I have been in the habit of making new beds every two years—and a few years ago ordered the old bed to be broken up; my gardener fortunately neglected to do so; for the new plants flourished famously—they gave little or no fruit; whilst the old *ones* intermingled with grass bore an abundance of fine fruit; and this year, though six years old, gave more than my family could consume of fruit nearly equal in size, and quite so in flavour to the very best of their kind—growing on tall stems, and having the advantage of being free from sand and dirt. This may be considered a slovenly mode of culture; be that as it may—I merely state the facts, how I have obtained fine fruit, when the secundum artem system gave me none. We derive most of our agricultural and Horticultural information from Great Britain, and are, perhaps, too apt implicitly to apply to our dry climate, rules drawn from a cool and moist one.

With my best wishes, believe me,

Respectfully your ob't serv't,

W. S. GIBBES.

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FOR THE AMERICAN FARMER.

May 23, 1823.

SIR,

Of the various seeds which you kindly sent to me, none have as yet vegetated, but the purple or blue corn, the eight grains of which have been planted in a field of rich clover, upon the patent plan of the late Mr. Hall. Not one of the seventeen seed of ice rind melon has vegetated; they were planted so carefully distinct, that you might have relied upon the purity of the produce—but as I cultivate ten varieties of my own, in 286 hills, it is, to me, more a fancied than a real loss.

The tobacco which grew upon Sideling Hill is beautiful, and will be fairly exhibited, and it gives me an opportunity to repeat, my so often repeated advice to agriculturists, to emulate the enterprize of our manufacturers, and endeavour to increase the value of their labours by improving the quality of the article raised—I also made an attempt to cultivate tobacco, and sold at $2. Your friend's hogshead was equal to seventeen and a half of mine, to say nothing of the cost and charges upon the sixteen and a half. It is essential to increase the profit of industry, that the article should be the best of its kind; and taken to market in the best and neatest condition.

The flour barrel of Philadelphia, is in every respect neater than the barrel of Baltimore; and may it not be owing to this circumstance that the flour of the former, commands a higher price in Europe, than that of the latter?

It is but justice to assure you, that the farmer is supported with a spirit and in a manner, much beyond my expectation, and much to the satisfaction of your subscribers. But I think you might enlarge your plan, and include within its scope, rural sports, domestic improvements for profit, comfort, or ornament; nor need you be ashamed to select from books, and domestic and foreign journals: for instance, I now enclose to you a piece upon Hydraulics, taken from a newspaper. This is a subject all important, not only as it regards our rural comforts, but may it not have great influence over the health and comfort of our cities. Who will say that the *hills* of Baltimore may not (if this narrative is true) produce fountains of living water, more delicious, and at less expense, than what you now receive from your excellent water works?

With this you will receive some cymblin seed, but the season is too far advanced to expect a full crop from them. This variety is much earlier than the long kind, and to make a full crop, should be planted *as soon as the frost is out of the ground*; they will not vegetate one day before their appointed time. I recommend to your friend to plant in drills at eight feet apart, and a single plant two feet apart in the drill. The hunch cymblin, of which I have lost the seed, is, I think, the most productive, upon a given space. Rich land is necessary for success—and as the season is so far advanced, it should be land disposed to produce moisture.

Your obedient servant,

F.

J. S. SKINNER, ESQ.

N. B. Gourds should be planted in February.

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From a Compendious Dictionary of the Veterinary Art.

ON THE DISEASES OF DOMESTIC ANIMALS, AND THEIR CURE.

DYSENTERY. I have never seen a disease which exactly corresponds with the dysentery of the human body: it is said, however, to be "not uncommon in the horse, and more frequent in cattle and sheep. It very commonly begins with some degree of fever, as a trembling, dryness of the mouth, loss of appetite, a great degree of weakness, drooping of the head and ears, sometimes a copious sweating, but more commonly a dryness and heat of the skin; there is usually a heaving of the flanks, and the animal turns his head towards them as if griped: there are frequent stools, but these seldom consist of the natural excrement, but of a mucous slimy discharge, accompanied with a peculiar fatty substance like soft suet; there is evidently much distress during these evacuations, and sometimes the fundament appears excoriated: it is not uncommon to see blood pass with the stools, generally in streaks, but sometimes in such quantity as to tinge the whole discharge of a red colour; and in the latter stage of the disease there generally appear membranous filmy substances, which have been compared to soaked leather. The pulse towards the beginning of the disease is hard and full; but as the disease goes on, it becomes quick, small, and sometimes irregular. The animal is very stiff and averse to motion; and, if the disease continues long, there usually comes on a swelling of the legs. This disease does not appear so dangerous among the inferior animals of this climate as in warmer countries: but it sometimes proves fatal, or terminates in a weakness of the bowels and scouring that are not easily removed. It is necessary to distinguish this complaint from the common purging or scouring, with which it is very generally confounded. It must therefore be observed, that in scouring there is no fever, whereas this is common in dysentery; that the discharge in scouring, though thin, has almost always the appearance of excrement, is not bloody, and is scarcely ever mixed with fatty matter. Dysentery is more common in hot weather and in hot seasons than at other times; but is very commonly produced by the sudden application of cold, especially to the legs and belly, when the body is over-heated and fatigued by exercise: hence swimming in autumn, drinking largely of cold water when in a profuse sweat, or other sudden changes from heat to cold, have commonly produced it. It is said to be brought on by riding a horse very hard in hot weather. As it seems certain that dysentery is of an inflammatory nature, it is proper to begin the cure by bleeding." If the pulse is quick, and the blood when coagulated has much buff or size upon it, it may be proper to repeat the operation after a few hours. Some laxative medicine should then be given, and an opening clyster thrown up. The following laxative will be found to answer the purpose:

Powdered aloes from two to three drachms.
Carbonate of potash, two drachms.
Warm water, eight ounces.—Mix, and add of castor oil, twelve ounces, for one dose.

When purging has taken place, the horse should be well supplied with gruel made of wheat-flour, and if he refuse to drink it, he should be drenched. The body should be kept warm and well rubbed, and the legs bandaged. When the disease has been subdued, the horse's strength is to be recruited by tonic medicines and a nourishing diet. When the disease continues after the bowels have been emptied, a ball composed of

Opium, a drachm,
Ipecacuanha, half an ounce,

has been recommended; but this, I believe, will rarely be found necessary. It is said that cattle are subject to a similar disease, only that in them there is not perhaps so much mucus or slime discharged with the dung; and that it is not uncommon in sheep; in the latter animal it is commonly named Brackshaw or Breakshaw, and in cattle Fardle-bound. In these animals a laxative of Epsom salts, gruel, and castor oil, should be first given, particularly to cattle; but in sheep, a practical farmer, Mr. Lock, has usually given warm milk: he proposes, however, to try, in addition to this, nitre, in half drachm doses, with chalk, or some other absorbent powder, and twenty or thirty drops of laudanum, twice or thrice a day, with frequent clysters of warm milk and water. We may infer, I presume, from his adopting this new plan, that the old one did not prove successful. According to Mr. Gillespie (quoted by Mr. Findlater,) the disorder is often produced by over-heating, when the sheep are hunted by dogs in folding them, &c. He thinks the disease infectious, and recommends tarring as the best preventive. Mr. Blaine, as well as the author from whom great part of this article has been taken, considers dysentery and Moltengrease to be the same disorder; but according to my experience, Moltengrease is very unlike the Dysentery of the human body, nor does it altogether resemble the disease above described. See *Moltengrease* and *Costiveness*.

EPILEPSY. Falling sickness or fits.—*Symptoms*. The horse reels about and falls down; sometimes he rears up and suddenly falls. The muscles of the eye act irregularly or are affected with spasm, so that the eye is shockingly distorted and fixed during the fit. Sometimes he lies in a state of insensibility for several hours; the pulse continues to beat, and there is often a disturbed kind of breathing. Sometimes there is also a violent motion of the legs. The duration of the fit varies; sometimes the horse gets up again in a short time, at another it continues several hours.—*Treatment*. Bleed plentifully, and if the fit continues, give the following drench:

Take of Fœtid spirit of ammonia, one ounce.
Compound spirit of lavender, half an ounce.
Water, about twelve ounces —Mix, for one dose.

To prevent a return of the fit, give a mild purgative. I examined the brain of a horse that had several attacks of this disease; they came on indeed whenever he was put into brisk motion, but lasted only a few minutes. There were about six ounces of water in its ventricles or cavities.

EXERCISE. It has been asserted by Mr. Clark, an author of some eminence, that "a much greater number of horses that are high fed, and stand much at rest in close warm stables, die of diseases which are brought on them from the want of regular exercise, especially in great towns, than from any other class of diseases to which they are liable." I perfectly agree with Mr. Clark in this opinion; and feel no hesitation in adding, that almost all the diseases of horses may be justly attributed to improper treatment or management; either in regard to feeding, exercise, state of the stable, or shoeing and general treatment of the feet. Though regular exercise is so salutary and even necessary in preserving the health of horses, they should not be suddenly put to such active exertions as they have not been accustomed to; for all sudden changes, whether from idleness to active exercises, or from these exercises to idleness, produce considerable changes in the system, and render both the solids and the fluids liable to disease. When a horse is gradually brought to that degree of exertion or labour in which he is to be employed, it becomes easy to him, and does not produce fatigue or difficulty of breathing; and when he has arrived at this state or habit of body, he is said to be in good wind and condition. But one great source of disease in horses is the improper treatment of them after they have been heated by exercise or hard labour. For though they come in covered with sweat, they are often exposed to the cold air uncovered, while their legs and thighs are washed with cold water; and not unfrequently they are allowed to drink freely of cold water while in this heated state. Hence arise inflammation of the lungs, bowels, or other internal parts; colds, chills, and a long catalogue of disorders, which it is needless to enumerate.

The time and manner of regulating a horse's exercise deserve attention. Thus it would be imprudent to make a horse exert himself too suddenly immediately after he is fed and watered. It is likewise improper to exercise horses in the rain, or when they are unable to bear it, either from former fatigue, sickness, or lameness. The greatest caution is necessary in exercising horses that are very fat and unaccustomed to labour. If ridden hard in this state, internal inflammation, fever, chill, or molten grease is likely to be the consequence. Horses in this state should have only walking exercise for a week or two, they should always take some mild purgatives or diuretics, and be fed rather sparingly. After this their exercise should be gradually increased until the wind and condition are adequate to the work for which they are wanted. This subject has been more fully discussed in the 1st vol. of *Veterinary Medicine*, in the chapter on Feeding, Exercise, and Grooming, and in the preceding chapters on the Ventilation of stables, and Condition.

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From a series of essays on agricultural and rural affairs. By "Agricola," a North-Carolina farmer.

CIDER.

As this is a general fruit year, and much cider is intended to be made, it will no doubt be acceptable to farmers, to state the best modes of cider making. It is much to be lamented that so little good cider is made in this state, which must arise from inattention to the subject, or from a want of knowledge of the best modes of making it; owing to one or other of these circumstances, many permit their apples to rot on the ground, or to be given to their hogs, whereas were they converted into cider, properly made, it would keep good the year round, affording for the table a wholesome and agreeable beverage little inferior to wine, and by many preferred to it.

In the northern states, the art of making good cider is so well understood, that almost every farmer has it by him the year round, and to their general use of cider, instead of ardent spirits, we may, in a measure, ascribe that temperance, health, and morality, for which they are remarkable. To encourage the manufacture of good cider, and to prevent its conversion into ardent spirits, by distillation, as much as possible, the latter of which is proving a curse to our country in the most lamentable manner, I will proceed to detail the best modes of making cider. as practised by the best cider makers in the northern states.

One of the first errors with respect to cider is, gathering apples when wet; the second is, throwing them together exposed to sun and rain, until a sourness prevades the whole mass; thirdly, making so large a cheese, that fermentation will come on before the juice can all be pressed out; for certain it is, that a small quantity of the juice pressed out after fermentation comes on, will spoil the product of a whole cheese; and fourthly, permitting cider, after it has undergone fermentation or working, to remain, on the lees, instead of racking it off. If, then, either of the above circumstances will spoil the cider, which I know to be the case, what must be the effect of a combination of the whole which frequently happens.

Having pointed out the errors to be avoided, I now proceed to state the methods to be observed, in the making of good cider.

Gather the apples that are intended for cider, when they are perfectly dry, and lay them down in layers, in the cider house, and other outhouses on floors, not exceeding two feet thick; where there is space sufficient, thinner will be preferable, for the object is to promote the ripening of the fruit, and the evaporation of the watery particles. In this situation they are left about two weeks, secured from rain and wet, but exposed to the air as much as possible, when they are again to be sorted, the rotten ones to be thrown out, and the sound ground in the mill or beat.—Here it will be proper to observe that the mill, the press, and all the materials used, be sweet and clean, and the straw clear from must. The pummice is then laid in troughs for 12 or 24 hours—this tends to sweeten the juice, enrich the cider, and give it a fine amber color. But the time in which the pummice remains in this state, must be regulated by the state of the weather, without measuring the length of time by hours; for it is evident that at one season the same length of time will produce no sensible effect, which at a much warmer season would induce the commencement of an acid fermentation. As soon as the juice is pressed out, the great art in making cider commences, as nature begins to work a wonderful change in it. The juice of fruit, if left to itself, will undergo three distinct fermentations, all of which change the quality of this fluid. The 1st is, the vinous; the 2nd, the acetous; and the 3d, the putrid. The first fermentation is the only one which the juice of apples should undergo to make good cider.—It is this operation which separates the filth from the juice, and leaves it a clear, sweet, vinous liquor. To preserve it in this state is the great secret; this is done by racking it off from the lees or dregs, fumigating it with sulphur, which checks any further fermentation, and lastly, by fining it.

The juice, as it comes from the press, should be placed in open headed casks, or in the largest vessels that can be procured, in which it should remain until the fermentation ceases. The person attending may, with great correctness, ascertain when this first fermentation ceases—this is of great importance, and must be particularly attended to.

The fermentation is attended with a hissing noise, which is heard by putting the ear to the bunghole, or in open headed casks by observing the bubbles rising to the surface, and there forming a soft spongy crust over the liquor; when the hissing noise ceases or the crust begins to crack, and a white froth appears in the cracks level with the surface of the head, the fermentation is about stopping. When the fermentation has entirely subsided, the liquor is fine and clear, and is then in a proper state to be drawn off—*and if then neglected*, the particles of pummice that had settled down to the bottom of the cask, will, during a warm or damp state of the weather, rise up again, mix with the juice, and thus produce a second fermentation, which is always acetous and injurious to the cider.

The cider should, therefore, immediately after the *first* fermentation ceases, be drawn off into sweet clean casks or hogsheads that have been well scalded and rinsed. To preserve the cider in its fine vinous state, and to check any further fermentation, it must be fumigated with sulphur. To do this, take a strip of canvas, or rag about two inches broad and twelve inches long; dip this into melted sulphur, (brimstone,) and when a few pails of worked cider are put into the cask, set this match on fire, and hold it in the cask until it is consumed, then bung the cask and shake it, that the liquor may incorporate with and retain the fumes; after this fill the cask, and bung it perfectly close by running pitch over the bung, so as entirely to exclude the air. Cider thus prepared will keep good and sweet until late in the spring, and if not consumed by that time, and intended for sale or further keeping, it must undergo the following more particular process:

At the time of fining cider there should not be the least degree of fermentation; and perhaps the best time for fining is, in winter, in steady cool weather. Draw off some gallons of cider, proportioned to the quantity of cider to be fined, into a vessel, to this add of isinglass pounded and unravelled into shreds, about two ounces to the hogshead, containing 112 or 116 gallons, or an ounce to a barrel. The liquor with the isinglass is frequently stirred up for three or four days, so that it is completely diluted into a thin jelly, and is then strained through a flannel or hair sieve. The fining may now be added to the cider without drawing it off, but the best general practice is, to pour your fining into the empty cask, and then draw off your cider and pour it on the fining. This leaves behind a great part of the sediment, checks insensible fermentation, and mixes intimately the cider with the fining. The cider thus fined, will generally become fine and bright in eight or ten days, and should then be drawn off from the lees of the fining, and bunged close or bottled. If drawn into casks, they should be bunged close and pitched over the bung to keep the air entirely out.

To do this effectually, after the bung is carefully driven in, bore a gimblet hole near the bunghole, and leave it open until you have covered the bung with the cement, to admit the air below, increased by the warmth of the cement, to pass off; when the cement is cooled and hardened, the gimblet hole is completely closed by driving a white oak square plug into it. When bottled, by cutting off the corks even with the bottles, and dipping its mouth into boiling pitch, it is as completely closed, as the best bottled claret or burgundy.

It will also be proper, previous to closing up the cider, to put one large and not more than two raisins to each bottle, and a proportionate quantity to each barrel.

Cider thus made, will keep good for years, and will exhibit that sparkling or bounding up, when poured into a glass, so pleasing in the finest champaigne wine.

FOR THE AMERICAN FARMER.

ON THE DISEASE COMMONLY CALLED THE *HOLLOW HORN.*

Mr. Skinner,

There is, perhaps, no disease in this climate from which our neat cattle have suffered so much, as that commonly called the Hollow Horn; and unfortunately, few persons have thought it necessary to give any attention to it, or its cure, for we find but little said in any agricultural work relative to its treatment.

The name appears to me, to be badly applied, as the horn alone is not the seat of the disease; it pervades the whole system—and cattle without horns are quite as subject to it, as those with them—having often seen those without horns have it.

The hollowness of the horn, proceeds from the violence of the fever throughout the system. I have known cattle feeding in the stall to be attacked with it, as well as those in poor condition, and no doubt those in bad plight are more liable to its attack, their system not being in a state to resist any disease; it occurs too at all seasons of the year, but more particularly in the spring.

The animal attacked with it looks rough; stares much in its coat, and falls off very fast in flesh, its food having but little effect in nourishing it. The eyes look very hollow and dead, and run with a yellow matter which collects in the corners, and around them. Many persons rely upon the feel of the horn, as the best indicative of the disease, but this, I think very uncertain; in some cases it is at the root, cold to the feel, while in others very hot. A very small gimblet will, however, remove all doubts, and the mark on the horn not visible after a few days. If the disease does exist, the horn will be found without pith, and little or no blood will follow the boring; whereas if the disease does not exist, you will find blood immediately upon entering the horn. The gimblet used for boring, should be well washed and greased after using; for if it is not, and should be used to try the horn of an animal not actually affected with the disease, it will most generally give it to them. It is a disease that is highly inflammatory and infectious; and the animal having it, ought to be removed from the herd until well. The following mode of treatment, I have found very successful, and the beast soon restored to a thriving state. As soon as I discover an animal affected with the hollow horn, I bleed it from the neck (in the same vein in which a horse is bled) from two to six or seven quarts, according to its age, size and condition, and give from three quarters to one pound and a half glauber salts; with a middle sized gimblet open the horns through and through, making the holes, so that they be perpendicular in the usual position the animal carries its head, so that the pus formed may have a free discharge as soon as the horns are opened; put through the hole into each about a table spoonful of strong vinegar, in which some salt and black pepper ground, has been put. The day following, the horns must be again opened and cleaned from the pus, which generally is now formed, and about a half a teaspoonfull of spirits turpentine, put into each horn, and a little on the poll of the animal daily, during the continuance of the disease. One bleeding is generally sufficient; but I have known cases in which it was necessary to repeat it three times, as also the salts.

The food during the continuance of the disease is important—corn in every shape is bad—potatoes are of great use, (with a small quantity of Brewer's grains, if to be had,) and the animal ought to have from one to one and a half pecks daily, with hay in the winter, and grass if in summer.

Potatoes have a wonderful effect on the animal as soon as the bowels are well cleansed, the importance of which, any person will be convinced of, who observes the discharge from the animal. In some obstinate cases I have given daily, from a half to one ounce of nitre, sprinkled on the potatoes. It is important the first bleeding to take as much blood as the animal will bear, as the fever is more easily checked by one large bleeding, than two small ones, and the animal better able to bear it. In many cases the bleeding and salts have been sufficient, without opening the horns; and when taken in the early stage will generally be found to answer, but the boring certainly assists in forming anew the internal part of the horn, and which, as soon as it commences forming, the holes in the horn should be allowed to close.

An animal having the hollow horn, should be sheltered from the inclemency of the weather, during its continuance. No age appears exempt from its attack, having seen it in a yearling as well as at all subsequent ages. I am induced to offer this mode of treatment to your subscribers, having never in any instance failed of restoring the animal, whereas before this mode of treatment was adopted I annually lost several. The fleam for bleeding cattle, should be rather deeper than that used for a horse, the vein in the neck, not laying so near the surface, the orifice is closed with a pin, in the same way as in bleeding a horse.

AN AGRICULTURIST of delaware.

June 30, 1823.

FROM POULSON'S AMERICAN DAILY ADVERTISER.

GOODSELL'S FLAX DRESSER.

Powelton, June 26, 1823.

Dear Sir,

I have the honour to communicate the result of a trial of Goodsell's Flax Dresser, before a committee of the Directors of our Society. The total failure of the various Machines which had been brought into view, to effect the important objects which Mr. Goodsell's ingenious and simple contrivance has completely accomplished, produced evident doubt in most of us, as to its successful operation. Yet, after the experiment, we are all convinced, that the liberality, and well directed zeal of Mr. Swartwout, has placed within our reach, the valuable Implement, for which premiums had been offered, and applications made in vain to European ingenuity.

I am very respectfully,
Your obd't Servt.
JOHN HARE POWEL,
Corresponding Secretary.

Jonathan Roberts, Esq.
President of the Pennsylvania
Agricultural Society.

Fifteen pounds of Flax plants, were, in our presence subjected to the operation of Goodsell's

Machine, by which they were perfectly broken in four and an half minutes—were scutched in seven minutes, and left entirely free from shieves. Two pounds two ounces of *very fine* Flax, were thus obtained, at the rate of more than ten pounds per hour, although the plants had not been well water wretted.

STEPHEN DUNCAN,
GEORGE SHEAFF,
GEORGE BLIGHT,
JOHN LARDNER,
REUBEN HAINES.
Philadelphia County, June 20th.

YEAST FOR BREAD.

The following methods of making yeast for bread are both easy and expeditious: Boil one pound of good flour, a quarter of a pound of brown sugar and a little salt, in two gallons of water for one hour; when milk warm, bottle it and cork it close; it will be fit for use in twenty-four hours. One pint of this will make 18 lbs. of bread. To a pound of mashed potatoes (mealy ones are best) add two ounces of brown sugar, and two spoonfulls of common yeast; the potatoes first to be pulled through a cullender, and mixed with warm water to a proper consistence. Thus a pound of potatoes will make a pound of good yeast. Keep it moderately warm while fermenting. This recipe is in substance from Dr. Hunter, who observes, that yeast so made will keep well. No sugar is used by bakers, when adding the pulp of potatoes to their rising.

[We are informed by a most respectable friend a miller of great experience, that a small quantity of *sprouted* wheat, say a teacupfull in a bushel, will prevent the flour from *rising* when made into bread, let yeast be never so good. This is often the cause of bread not rising, when housewives cannot account for it.]—*Ed. Am. Far.*

FROM THE NEW YORK AMERICAN.

There is a disposition with some of our countrymen to make invidious comparisons of whatever is both English and American. We have conceded to this love of every thing on the other side of the water, that our sky is too high; our moon considerably too small; our lightning less vivid; and our thunder barely audible, in comparison with the British; and since the war, in the same conciliatory spirit, we have yielded the superiority they maintained over us, in ships, and men, and artillery, and riflemen, and the bayonet. Z., in the Post last evening, would prove, from the Sporting Magazine, that many horses in England have greatly exceeded the performance of Henry and Eclipse on Tuesday last; and this, too, might have been conceded, had he not undertaken seriously to prove the fact, and then to assert more than he had proved, that there are many instances of recent date, &c.—Flying Childers is the admitted *nonpareil* of the turf, and his alleged performances are so great, that many impartial, but judicious men, suspect them to be erroneously reported. Taplin, however, asserts, without reserve, that Childers ran the distance of four miles in six minutes and forty eight seconds, carrying nine stone and two lbs. It is alleged in Rees' Cyclopedia, that he ran the Beacon Course in seven minutes and a half, and the round course in six minutes forty seconds; this is certainly prodigious, but not to be denied. Z. has introduced us to two horses, not of sufficient celebrity to have been ever named in the Sporting Dictionary, both of whom, by his account, ran the Beacon Course in ten seconds less time than Childers; and these are Chatham and Trajan; and Hambletonian and Diamond, by his account, ran the same course in fifteen second less time than Childers.—This is surely proving too much. If Z. will look into his Sporting Magazine for the two long and precise accounts of the famous race last mentioned, written at the time it took place, he will find one, stating the time of performance to have been *about* eight minutes; and the other more positively "eight minutes and a half," both horses having been merely galloped the first three miles.

Under the article *speed* in the Sporting Dictionary, written and published in 1803, Mr. Taplin has mentioned but two horses, Childers and Bay Malton. The last was great grandson of Childers—his dam from the Godolphin Arabian; he was bred by the Marquis of Rockingham, and "was esteemed the first horse of his years in the kingdom, and won more prizes of value and consequence than any horse of his time."

Bay Malton's most distinguished performance was *four miles* at York, *in seven minutes, forty-three seconds and a half*, carrying eight stone seven pounds. The celebrated Eclipse was "*a horse of his time*," and O'Kelly, his owner, is jeered at in the Sporting Magazine, for not having matched him with Bay Malton; and Eclipse's reputed speed is denied for that reason.

We are sure that Henry and Eclipse run four *full measured* miles in seven minutes thirty-seven seconds, and can prove it, beyond all manner of doubt. There is no evidence like this, and we say, none has come to our knowledge, after an elaborate investigation too, on which we can place any reliance, that this distance has been done in England, in the same time, by any other horse than Childers. Running and fighting are two very distinct performances; but their Chronicles in England have a remarkable similitude, in their most important feature.

And per-se-and.

P S. Will these chronicles even furnish their evidence, that three four-mile heats have ever been done in England, by any horse, in less than 24 minutes; for that, after all, is our boast.

From the New York Evening Post, June 2.

TO THE EDITORS.

In order to enable the public to form a correct opinion of "Southern pluck and Northern bottom," and whether it is really believed that Eclipse is "the best courser of his day"—"Too fast for the speedy, and too strong for the stout," will you be so good as to publish the inclosed correspondence. It is to be observed that the race proposed was to be run in the same year and within a few months of the one just decided, and surely the lapse of a few months could make no difference to Eclipse, a horse in his prime: but there would have been a difference between the races—Henry, in the last race carried, by the rules of the turf, the weight of a four years old, although he was not a four years old, but only three, and in the proposed race he would have carried only his proper weight, and have had to run on a different course, where he would have had, in the language of ancient chivalry, "a clear field and an equal sun."

Long Island, May 28, 1823.

To John C. Stevens, Esq.

Sir—I will run the horse Henry against the horse Eclipse, at Washington City, next fall, the day before the Jockey Club purse is run for, for any sum from twenty to fifty thousand dollars, forfeit 10,000 dollars. The forfeit and stake to be deposited in the Branch Bank of the United States, at Washington, at any nameable time to be appointed by you.

Although this is addressed to you individually, it is intended for all the betters on Eclipse; and, if agreeable to you and them, you may have the liberty of substituting, at the starting post, in place of Eclipse, any horse, mare or gelding foaled and owned on the northern and eastern side of the North River, provided I have the liberty of substituting in the place of Henry, at the starting post, any horse, mare or gelding, foaled and owned on the south side of the Potomac.

As we propose running at Washington City, the rules of that Jockey club must govern of course.

I am respectfully your's,
W. R. JOHNSON.

ANSWER.

Dear Sir,

The bet just decided, was made under circumstances of excitement, which might, in some measure, apologise for its rashness, but would scarcely justify it as an example: and I trust the part I took will not be considered as a proof of my intention to become a professional patron of sporting on so extensive a scale—for myself, then, I must decline your offer. For the gentlemen, who with me, backed Eclipse, their confidence in his superiority, I may safely say, is not in the least impaired; but even they do not hesitate to believe that old age and hard service may one day accomplish, what strength and fleetness, directed by consummate skill, has hitherto failed to accomplish. For Mr. Van Ranst, I answer, that he owes it to the association, who have so confidently supported him, to the state at large, who have felt and expressed so much interest in his success, and to himself as a man, not totally divested of feeling, never, on any consideration, to risque the life or reputation of the noble animal, whose generous and almost incredible exertion, have gained for the *North* so signal a victory, and for himself, such well earned and never fading renown.

I remain, sir,
Your most ob't serv't,
JOHN C. STEVENS.

The race was run, and the toasts drank on the 27th inst. The challenge for another race given on the 28th, and Mr. Stevens' answer (without date) for himself, Mr. Van Ranst, and the gentlemen who with him backed Eclipse, declining the offer, delivered on the 30th. The public will remark the difference between the cool, prudent resolve, and the rash, boastful toasts, even if none more offensive and boastful had been drunk than those which have been published.

A SOUTHERN SPORTSMAN.

ANOTHER CHALLENGE!

TO THE NEW YORK UNION ASSOCIATION.

Gentlemen—I have been, and still am of opinion, that your Northern bred race horses of the first class are not superior to ours of the second and third order; and I am willing to venture a small sum upon this opinion, on the following terms:—I will run a horse for each day's race over the Union Course next fall, against any Northern bred horse, for one, two, or three thousand dollars each day, horses to be entered, and in every respect to be governed by your rules. That Henry, Betsey Richards, John Richards, Childers, Sumpter, and Washington—as also Eclipse on your side, shall be excepted; the selection shall be made from horses that General Johnson never thought of when engaged in the great Match Race, and it is rational to suppose that the sum betted would induce him to recollect every trump in his hand. I propose this method, as I have seen your indisposition to match for a large sum by your non-acceptance of the late challenge. As I first commenced the rivalship, I am willing to keep it up, believing it to be the best plan (and I might add the only method) to improve and keep alive our stock of race horses; and too, from my acquaintance with the Sportsmen of the Union Course, I can meet them, beat them, or be beaten, and still be friends. If the proposition meet your approbation, please to answer me—or change it in any way you think proper, that shall be equitable, liberal, and convenient. Be good enough to name the sum, and in what manner the forfeit shall be secured. I will also run a three years old (untried) colt, against any Northern bred three years old, two mile heats, for 1500, 2000, or $2500, half forfeit, to be named at the starting post. I wish to meet the Northern Sportsmen again, and it cannot be expected that I, or any other sportsman can travel horses 500 miles for small purses, not winning enough to defray expenses, if successful—for that reason I offer the additional sum to be raised by betting. So that should you at any time feel disposed to meet me on the Virginia courses, I pledge myself that you shall be accommodated with bets to that amount, as I know you can afford to travel the distance for our purses only, notwithstanding they are nearly as large as yours, and ten different Courses to run over. A pledge in any newspaper on your part to comply with the proposition here made, will be satisfactory to me—you can name in what way you wish me bound.

I am, very respectfully,
JAMES J. HARRISON.

Petersburg, Va. June 27.

GARLIC.

Some time since, when the Fall Fever raged violently in the neighbourhood of a canal, then in a state of progress, numbers of the workmen engaged on it eat plentifully of garlic, and wholly escaped, while those who abstained from the use of this article, were severely afflicted by the disorder.

That this may have been accidental I freely admit: but garlic may, nevertheless, be a specific against Autumnal Fevers. If so, it is an invaluable article in the Materia Medica. Persons in the neighbourhood of canals and stagnant waters generally, are advised to make trial in the course of the ensuing fall, and communicate the result.—*Poulston's Daily Advertiser.*

Silk Worm.—In a communication to the Society for Arts and Manufactures, (vol iv. p. 163,) it is stated by Miss Henrietta Rhodes, that one line of the silk worm, when unwound, measured 404 yards, and, when dry, weighed 3 grains. Hence it follows, that one pound Avoirdupois of the thread, as spun by the worm, may be extended into a line 535 miles long, and that a thread which would encompass the earth would weigh no more than 47 pounds.

A report of the tobacco inspected at, and delivered from Piscataway Ware-House during the quarter, commencing on the 7th day of January, 1823. Ending on the 1st day of April, of the same year.

	Domestic growth	Growth not of this state.	Re-inspected.	Total.
Number inspected.	73			
Number delivered.	45			

JOHN C. MOORE, Inspector,
TREASURY OFFICE, ANNAPOLIS, June 24, 1823.
True Copy, from the original report on file in this office.
B. HARWOOD, Tr. W. S. Md

THE FARMER.

BALTIMORE, FRIDAY, JULY 11, 1823.

☞ INTERNAL IMPROVEMENT.—The space appropriated in this Journal to the consideration of the means and the advantages of improved roads and canals, has, we are glad to find, been promptly claimed, and well filled by writers qualified to develope and explain them; and we presume they have chosen this medium, to promulgate the result of their patriotic and valuable researches, under the consideration that the prosecution of great publick works of this nature, will promote, in an especial degree, the welfare of the *landed* interest—which interest is best addressed and enlightened through the medium of a journal exclusively devoted to it; and, patronised in fact, by many of the most intelligent farmers in all the States of the Union—our vanity at least, leads us to lay this "flattering unction" to our bosom—and whether the conjecture be vain or valid, we are assuredly well pleased with being made the channel, through which the publick may be awakened to the sources from, and the means by which, under a free government, our country may be pushed to a yet higher degree of wealth, prosperity and power, than she or any other has ever yet attained.

We have, however, been apprehensive that some would be dissatisfied with seeing in a single paper, *so much* on one topick—but again, we have anticipated, that in relation for instance, to the Potowmac and the Susquehanna Canals, they would reflect that there is no time to be lost. The legislature, in a spirit which augurs well, has moved in these cases—Commissioners have been appointed—the time is at hand for them to act—the subject is comparatively new—the work is extensive, and calls for much personal investigation and labour, and their report is to be prepared and made to the *next* legislature. Hence it is that we are bound to present, and our subscribers to accept, more as relates to these objects, than otherwise might comport with our desire to give variety to our pages.

These explanations will account too, for our departure from the course we had marked out, as it was our intention to have *first* published *general* views of the great outlines, courses and advantages of improved national roads and canals—and to have given the most condensed and well arranged expositions of the *constitutional questions, pro* and *con*, as to the *power* of the *general* government over such subjects.

In pursuance of the first object, we had put on file the luminous report of Mr. Calhoun, the secretary at war, whose views of National policy are always magnificent, and exhibited in colours as resplendent and captivating as his own genius; and in regard to the *constitutionality* of this exercise of national sovereignty, on turning to our files, we find that for that purpose, the able speech of Judge Hemphill in favour of the power, and one from Gen. Smyth against it; the latter delivered on the occasion of the appropriation for the Cumberland road—are all the papers we have; but we have been compelled to postpone these for the sake of letting in the practical remarks of our friends, Kenworthy and Briggs, as being applicable to two important projects, now *actually under way*.

These writers are to be judged by their works—of Mr Briggs, whose first essay appears in this number, it may be observed that he is, already, extensively known to the community. It would appear that mathematics, and the application of mathematical, mechanical, and physical principles to the useful arts, have been his favourite study. And it has been his lot to be employed, during the years 1817 and 1818, in the state of New York, as civil engineer, on some difficult parts of her Great Western, or Erie Canal; during the years 1819 and 1820, in the state of Virginia, on the James and Kanawha rivers, and in locating and designing a *new* canal near Richmond; and during the years 1821 and 1822, in finishing the survey, and making all the calculations and estimates for the proposed Potomac Canal. These things are mentioned, in order to show that he ought to be admitted to have some *practical* acquaintance with the subject on which he now addresses the publick. We do not permit ourselves to take any sectional view of these branches of publick improvements, which might incline us to the right or left, and much regret the *singular temper* of *some* who claim all the merit and money for one scheme, and would grant nothing to the other. They remind us of naughty boys who won't relish their own stick of sugar candy, because their brother's portion is a morsel larger.

☞ It will be remembered that the Editor received for distribution from Com. Porter, some seed of cotton, of singular growth, from *Manilla*. A much valued correspondent is preparing for the Farmer, some remarks on that important plant, but wishes, before he concludes them, to have a view of the Manilla cotton and seed. Will any one of the gentlemen to whom the seed was sent, have the goodness to supply the Editor with a small portion of them immediately?

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $7—sales—White wheat, $1 42 to 1 50—Red do. $1 42 to $1 43—Rye, 75 cents—Corn, 50 to 52 cents—country Oats, 40 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Buckwheat, none—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 34 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $2 75 per bbl.—No. 2, $2 50—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 12 cts per lb.—Eggs, 12½ cts. per doz.—Hay, $18 per ton—Straw, $9.

MARYLAND TOBACCO.—The following sales made this week of Prince George's County Tobacco—26 hhds. being the entire crop of B. H. Mullikin, say 19 First and 7 Seconds assorted from common dark to fine Reds at $9 round—30 hhds. crop tobacco, raised by Benjamin Oden, at $10—1 hhd. raised by John Duvall near Nottingham, at $20.

Prices of all descriptions are fully maintained, and the good qualities improving.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE, TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

No. VIII.

Good evidence, is a certain indication, and the invincible support of a good cause.

64. The trade of the Susquehanna stands characterised, by the most ample testimony in its favour, (12 to 18) as being a trade of *a very superior extent and importance, at present;* and from the plain nature of the case, it cannot fail to be *a greatly increasing trade for ages to come.* Being derived from a country (16) containing 30,000 square miles; equal in extent (16) to six times our Turnpike conveyance, which is but 5,000 square miles; from a country (14) sufficient, *of itself*, to maintain a city of the first magnitude; including (12) the Belgium of the Union; inferior, in richness and fertility (17) to no portion of the United States; an inexhaustible granary for wheat, (12) competent to double the exports of Philadelphia; a country, in short, whose extent and importance (14) are but imperfectly understood; it must be evident, *at first sight*, that the trade of the Susquehanna, will be certain to amount to a most *astonishing magnitude*; to more than six times the trade from the country, upon our turnpikes.

65. I have said *more than six times;* because with the advantages of improvement, which in a few years may be effected upon the Susquehanna, *were there only a good water communication provided*, by which the immense productions of the soil, could, *with facility, be dismbogued in Baltimore*, it would be entirely a rational event, for six times the extent of country, such as is above described, to be the means of *more than six times the amount of trade*, and consequently of *more than six times* the clear profit, that can reasonably be expected from our turnpike conveyance; more especially as it is well known *to be the fact*, that within these limits there are, in the barrens of Baltimore county, and elsewhere, large portions of country so very unproductive that *very little, if any thing*, is ever to be seen from them, in any of our markets.

66. From this view of the subject it cannot reasonably be doubted, but money appropriated to the opening of a Canal between Baltimore and the Susquehanna, would be excellent stock; abundantly better than bank-stock, or any other stock in which capital can, at present, be vested. In illustration of the certainty of this fact, permit me to offer, a few observations: Being some time past, in Philadelphia, I was present in a company where the great advantages appreciated in favour of that city, by means of their improved water communications, became the topic of conversation; among other benefits, it was stated that when the improvements, then in progress, should be completed, the best Lehigh coal, *exactly similar to that of the Susquehanna*, could be delivered as low as 20 cents per bushel, throughout the city. Ten bushels of this coal, that would thus cost only $2, it was added, were equal to a cord of wood, that at a moderate calculation would cost $5. Hence, it was observed, that if coal were substituted instead of wood, $3 might be saved upon every cord, and that, in consequence of 300,000 cords, being required for the yearly supply of the city, it was entirely practicable to save $900,000 per annum in the article of fuel alone.

67. Were Baltimore disposed, by a similar course of economy, to realize a saving of $3 per cord on 120,000 cords of wood, by substituting in lieu of it, 1,200,000 bushels of Susquehanna coal, this single item would amount to an income of 36 per cent. per annum, attainable with the utmost facility, could our *citizens only be persuaded*, to put forth their energies, and adopt the noble resolution of making the whole Canal themselves; which, it is believed, might readily be done, provided *they were but as certainly and entirely willing, as they are certainly and entirely able*, to accomplish the object without a single auxiliary. But by the citizens of Maryland, it can doubtless be effected with too much ease, even to deserve the name of an enterprize; and in the capacity of stockholders, this calculation leads to a very important item, as follows:

68. Computing 28 bushels to the ton, which is understood to be about the usual weight of the anthracite coal, the above quantity amounts to nearly 43,000 tons for family use, and including the additional supply for iron works, blacksmiths, and other purposes, it may fairly be presumed that 60,000 tons would not exceed the demand. In other words should the Canal be 100 miles, the amount of toll, at $1 per ton, will be $60,000, that is *six per cent. per annum*, upon one million of dollars, were the *whole to be expended*, or, *eight per cent. per annum*, in the event of 25 per cent. of the appropriation being saved. Both the foregoing proceeds, being added together, are equivalent to 42 *per cent. per annum*, in the former case, and to 56 *per cent. per annum*, in the latter case, which is certainly far preferable to the best stock of which we have any knowledge, Canal stock only excepted.

69. But if one solitary article of transport, be capable of furnishing such an *animating prospect* in favour of the Canal, how much more *animating must that prospect be*, could all the countless articles be included in the estimate, to which it will certainly afford the most advantageous conveyance possible. By stone cutters in this city, for example, it has been estimated that the yearly demand for marble, from up the Susquehanna, and for free stone, from quarries, of an excellent quality, in the vicinity of Harrisburg and Middle-town, would with Canal conveyance, exceed 25,000 tons. From the numerous furnaces and forges up the Susquehanna, the quantity of bar iron and castings that would yearly be sent to market, would, in all probability, amount to 20,000 tons. I have seen the iron estimated at more than double the weight that is here adopted. Again, from 8 to 10 millions of feet of lumber, together with shingles, staves and heading, to a vast amount, even supposing a part of it, *at times*, to brave the *terrific dangers of descending the river*, would, no doubt, constitute another very extensive item; but as some difference of opinion might occur in this respect, I shall decline an estimate of particulars, and pursue it, *only*, upon general principles. Enough has been said, I presume, to prove, to a certainty, that the transport upon the Canal would be very abundant; and that a large portion of that abundance, would consist of articles, that, without its facilities, would naturally be excluded from market, for want of conveyance.

70. It is evident, that, were the anticipated Canal opened, between Baltimore and the Susquehanna, and were boats of from 10 to 15 tons, also employed in the transport up it, that their medium cargo, that is 12 tons and a half, would be more than equal to the loads of six waggons carrying two tons each. Again, owing to the country up the Susquehanna, being more productive (65) than that upon our turnpikes, and of six times the extent (16) it follows, with certainty, that boats of the size above proposed, would require to be *more numerous*, and *more constantly* passing along the Canal, to and from market, than the waggons now are, upon all our turnpikes, supposing them to be reduced into one. Again, were the toll, that was to be collected, one cent per ton per mile, (which is the usual estimate) the toll of one of these boats and its cargo, supposing the distance to be 100 miles, (48) would be from 10 to $15, the average of which sums is $12 and 50 cents.

71. From the keeper at the first gate, upon the Frederick turnpike, it has been ascertained, that agreeably to the accounts which have been kept by himself, and certain facts, which are within his own knowledge, upwards of 23,000 waggons come into Baltimore in a year, loaded with flour; but to avoid too high a calculation let the round number 20,000 be adopted. Exclusive of flour waggons it has been estimated, again, that an equal number of other waggons annually arrive loaded with all other articles. Hence, the number of waggons coming to our city, in the course of a year, must be upwards of 40,000. Hence too, according to the premises already stated, the number of boats required to traverse the Canal, must exceed 40,000. But the toll of 40,000 boats, at $12 and a half each (70) coming to market, and of the same number, on their return, supposing them to be half loaded, at $6 and a quarter each, would amount to $750,000 for the yearly collection of tolls; being at the rate of 75 per cent. per annum, on the contemplated appropriation of one million of dollars, were it so to happen, that *the whole should be expended;* or, in the event that 25 *per cent. were to remain unexpended, cent per cent. per annum*, would then be the amount produced by the Canal to the stockholders.

72. Can it be possible? Did I *dare* to say, *cent per cent. per annum?* The incredulity of popular opinion, will I fear, be ready to discredit the truth of my essay. Perhaps be almost tempted to cast it down in disgust, and resolve never to look at another. But let me entreat all such, should there be any, not to be over-hasty in coming to a judgment. Permit me, to remind them, that, it is equally as necessary to have *a certain and correct reason for disbelieving, as for believing.* What then, in this case, may I take the liberty to inquire, is the reason for with holding belief? The answer perhaps, in every instance, would be equal to this. I cannot exactly tell; but I am very certain it must be impossible. In the very same manner any man unacquainted with the *polarity of the magnetic needle*, or, *the power of steam*, might contend against their *known reality*. But, notwithstanding his disbelief, the facts could easily be made to *stare him in the face*, and be proof positive against him. So in the instance before us, *cent per cent. per annum*, has been proved by one calculation, and others may be adduced to confirm it.

73. By referring, for example, to the Records of the Register, in the Mayor's Office, it will be found, that, to take a round number, the quantity of flour annually brought to the Baltimore market, is nearly half a million of barrels. Of this number it is understood that from 40 to 50,000 barrels, rush yearly down the Susquehanna, and that other small quantities come from Virginia, and the Western country, by waggons. To make a very liberal allowance, let the whole, thus required, be estimated at 80,000 barrels. There will then remain 420,000 barrels for the quantity received from our 5000 square miles of turnpike conveyance, which at 10 barrels to the ton, are equivalent to 42,000 tons. Adding to this an equal tonnage to include all other articles, coming to our market, and the same quantity for half cargoes returning, the sum will be 126,000 tons, at $1 per ton, is equal to $126,000 toll, on the ton-

nage from 5000 square miles, or $756,000, *from a more productive country, of six times the extent.*

74. Thus, the former calculation appears to be substantially confirmed, with the addition of $600 in favour of the Canal. Thus, it appears that the evidence, *at home*, is highly favourable for men of capital to embark their funds, in opening the *proposed new channel to the Susquehanna*, with the most ample assurance of an abundant emolument in return; far exceeding any other stock, except canal stock, and far beyond all competition, from any business, even the best, in which money can possibly be vested. Merchants have many serious risks to encounter. Adventurers abroad, and bad debts at home, are often the means of their ruin. The farmer, owing to an unfavourable season, or the depredations of some destroying insect, frequently enjoys but a very reduced part of a crop. The collections of mechanics and labourers are in general very precarious. But, in the case of the Canal, the risk is *almost too small* to admit of an actual discovery. Let the banks be well secured in the commencement, and as long as water shall continue to flow; while men shall remain to inhabit the earth, and to have occasion for intercourse one with another, the canal will be, *certain to continue in use*, and to be a *productive source of revenue* to the stockholding parties.

75. Having thus, as I hope, explained in a manner too certain to be doubted, the vast emoluments secured to the stockholders, I come now to investigate a portion of those super-abundant advantages that are to accrue to the public. That the annual expenditure of our Baltimore population, for subsistence, habitation and clothing, cannot be less than three millions of dollars; that at a medium calculation, it must, *in fact*, amount to six millions (26) has already been explained. From the nature of the case, however, it is evident that the three millions, to wit, only $50 for each individual, would require a very economical mode of living. But, as has before been observed, (25) many there are, *who fare sumptuously every day*, and spend an abundance. Hence, it may rationally be inferred, that a large excess is created over and above the economical sum of three millions. Admit the bay-trade that is found in the Baltimore market, and that portion of our waggon trade coming from beyond our turnpike conveyance, to be competent to meet that *excess, whatever it may be*, and it will then follow that the profits on the trade of 5000 square miles, must amount to three millions of dollars. If not, it is evident, our capital must be in a wasting condition.

76. In the event of there being any deficiency, our expenditures must of necessity exceed our income, and be the means of hastening us, (28) with a rapidity, in proportion, to the vortex of ruin. But with the trade of 5000 square miles, we have enjoyed a state of prosperity; consequently the profits of its trade must be equal to three millions, *at least*; and at the same rate the profits on the trade of six times the extent of a *more productive* country up the Susquehanna, may safely be estimated at 18 millions, at least. This would certainly be a very handsome amount for the citizens of Maryland, to put into their pockets yearly; and it is, *with equal certainty*, a very handsome *inducement* for them to embark in the business with energy, and to make the Canal. Every dollar of this money, as it was received, would be so much added to the wealth of the state of Maryland. It would first go into the *coffers of our own merchants*; and others immediately concerned in the trade, and from thence it would naturally flow into the *coffers of other, and other individuals, and those of the state*, until by a *wider, and wider extension of intercourse*, all classes of the community would *liberally* partake of the general benefit; the common prosperity would be greatly promoted, and all would have cause to rejoice.

77. But as we proceed, let us be careful not to extend our views beyond the bounds of reasonable realities. Let us remember that the exertions of Philadelphia will *certainly be very great*, to draw from us a part of these profits. It is presumed, however, that there will be an abundance for both. In point of competition, a serious disadvantage is decidedly against our rival. Being 40 miles more remote from the place of separation, between the two routes, the consideration of interest will naturally award *to ours the preference*. But should they, by the *mere dint of buying higher, and selling lower*, than either party can reasonably afford, to compensate their customers for the difference in the time and expense required, so as to succeed in turning out of the shortest, as well as the most direct and natural route, one third, or at most one half of the trade, in question, an annual advantage of from 9 to 12 millions of dollars, would still be remaining for our encouragement. Again, let it be further observed, that it is by no means my prospect, that the whole energies of the country up the Susquehanna, either *could*, or *would* be put forth at the very commencement. Neither can it be desirable they should. We, ourselves, would *most undoubtedly*, require time to *grow with the growth*, and *strengthen with the strength*, of a trade so unwieldly, and superabundant.

78. I have already recognised the Potomac Canal as an object (2) of great importance. I am not only entirely willing, but sincerely desirous, that all its facilities, all its advantages, should be duly appreciated and improved. But though I am thus fully disposed to admit *all that is right* in its favour, it will by no means follow, that I am equally bound to admit, *all that is wrong*. Its patrons appear to step forward, and to arrogate, as exclusively belonging to the object of their choice, the possibility of forming a Canal navigation between the Eastern and the Western waters. But in this respect the correctness of their pretensions may, with great reason, be doubted. It is at least, *very possible*, and from information now before me, very probable, that the required facilities for extending a water communication across the Allegany, may, upon examination, be found in greater perfection, and in a form vastly more susceptible of improvement, in a different part of the mountain.

79. According to the report of the Potomac Commissioners, page 23, it appears that a tunnel of two miles in length, will be required to pass through the dividing ridge, at a depth of 200 feet below its summit, to connect the waters of Deep creek, a branch of the Yahogany, on the west side of the mountain, with those of Crab tree run, on the east side, a branch of Savage river, which empties into the Potomac. Such an extensive tunnel, it would certainly be desirable to avoid, should an opportunity, more favourable, be discovered in another situation. The information to which I have alluded, is to the following effect: that a branch of Bob's creek, whose direction is towards the Susquehanna, heads far west, in the Allegany mountain, and runs to the eastward; also that a branch of the Little Conemaugh, whose course is towards the Ohio, heads far east in the mountain, and runs to the westward; that these two branches, pass each other in a situation not more than 200 or 300 yards apart, where either of them is of a size sufficient to turn a mill, and where in the estimation of my informant, the elevation of the ground between them, does not exceed 30 or 40 feet. This account I received from a person who stated to me that he had been on the ground; and that in his opinion there would be no obstacle to prevent a Canal being opened from that part of the mountain, to the Frank's Town branch of the Junita, with convenience; as the descent in that direction, as far as he could recollect, was a general descent, without being interrupted by any high hills, or deep hollows.

80. In a communication by letter, which is now before me, I am also informed, that, by an old hunter, well acquainted with that part of the Allegany mountain, between the head waters of Bob's creek, and those of the Conemaugh, it has been stated, that, a large never failing spring, breaks out within a stone's cast of the top of the mountain, on the west side, and another on the east side, not far distant, which empties into Bob's creek. These, are undoubtedly circumstances, which, if correctly stated, it is highly important the facts should be minutely investigated, and certainly known. The Herculean task of forcing, through the base of an elevated mountain, a tunnel of *two tedious miles* in length, at all times as dark as a dungeon, and far more dismal and uncomfortable than midnight, to be navigated, ought not, in my humble opinion, to be attempted but in consequence of the real and unavoidable dint of necessity. This dint of necessity, however, cannot *even be supposed to exist*, in our case, unless the persons from whom the foregoing representations have been received, were more widely mistaken, than would appear to be possible, for men of common intelligence. Under these considerations permit me to suggest, whether it would not be entirely proper, at an early period, for the situations in question to be correctly investigated, that if the superior advantages, which have been adverted to, shall be found to exist, it may be so understood and explained, before the public mind shall be further deceived and led astray upon the subject.

81. Should this route across the Allegany be found, upon examination, to claim a decided preference, the proposed Canal from Baltimore to the Susquehanna will from that moment become doubly, and trebly pre-eminent. That event, it is presumed, would place it completely beyond the reach of all reasonable competition. The Ohio Valley is estimated to contain 200,000 square miles. Could we only extend our facilities to that prolific region, through the Susquehanna Canal, it would hardly be able to sustain the transport that would presently be required upon it. I will not suppose that another Canal would be necessary, but it is altogether likely, that a double set of locks would be indispensible. Were the trade of the Ohio to be collected into the same channel with that of the Susquehanna, the sum of the whole would become *almost* immense. In this case, it might, with justice, be inferred that the mind would need "new powers of comprehension" to form an adequate idea of its great and wonderful dimensions.

WILLIAM KENWORTHY.

AGRICULTURE.

The Pennsylvania Agricultural Society will hold their First Exhibition and Cattle Show on Wednesday, Thursday, and Friday, the 22d, 23d, and 24th of October next, near the PAOLI, in Chester County, eighteen miles from Philadelphia, (on the Lancaster turnpike road) when, in conformity with the Act of Incorporation, the following Premiums will be awarded.

NEAT CATTLE.

For the best bull, not more than 6 nor less than 2 years old, $50—next best, 20—next best 10.—

for the best bull, not more than two years old $30---next best, 15—next best, 10—for the best Cow, not more than 7 nor less than 3 years old $30—next best, 25—next best 10—for the best Heifer, not more than 3 nor less than 1 year old 20—next best, 10—next best 5—for the best Heifer, not more than 12 months old $20—next best, 10—next best, 5—for the best Bull of Durham blood, $20—for the best Bull of Devon blood, not more than three years old $20—For the best Heifer, of Durham blood, not more than 3 years old, $15—for the best Heifer, of Devon blood, not more than three years old $15.

SHEEP.

For the best Ram, not more than 2 years old, $10—next best, 5—next best, 5—for the best Ewe, not more than 2 years old, $10—next best, 5—for the best Ram not less than 2 years old, $10—next best, 5—for the best Ewe, not less than 2 years old, $10—next best, 5—for the best Ram, of Dishley blood, not more than 2 years old, $10—for the best Ewe, do. do. do. $10—for the best Ram, do. do. not less than do. $10—for the best Ewe, do. do. do. $10—for the best Ram, of Southdown blood, not more than 2 years old, $20—for the best Ewe, do. do. do. 20—for the best Ram, do. do. not less than 2 years old, $20—for the best Ewe, do. do. do. $20—for the best Merino Ram, not more than 2 years old, $10—for the best do Ewe, do. do. $10—for the best Merino Ram, not less than 2 years old, $10—for do. do. Ewe, do. do. $10—for the best Broad-tail Ram, of Tunisian blood, not more than 2 years old, $10—for the best do. Ewe, do. do. do. $10—for the best do. Ram, do, not less than 2 years old, $10—for the best do. Ewe, do. do. do. $10.

HORSES.

For the best thorough-bred Stallion, not less than 3 years old, $50—for the best do. fit for draught, not less than 3 years old, $50—for the best thorough-bred brood Mare, not less than 3 years old, $30—for the best Mare, fit for draught, not less than 3 years old, $30—for the best pair of Draught horses *(reference being had to their performance in the plough,)* $25.

OXEN.

For the best yoke of Working Oxen not more than 9 nor less than 3 years old *(reference being had to their performance in the plough)* $25—for the best Ox, not more than 9 nor less than 3 years old, $15—for the best Steer, not more than 3 nor less than 1 year old *(reference being had to the mode of feeding,)* $10.

SWINE.

For the best Boar, not more than 4 nor less than 1 year old, $10—next best, $5—for the best Sow not more than 4 nor less than 1 year old, $10—next best, $5—For the best Pigs, not less than 5 in number, not more than 9 nor less than 3 months old, $10.

☞ *All persons to whom premiums shall have been awarded for Breeding Animals at the Exhibition, will be required to give such assurance, for their continuance in Pennsylvania,* one year thereafter, *as shall be demanded by the Directors.*

CROPS.

For the largest quantity of Flax, produced on one acre, $20; for the best crop of Wheat, on not less than 10 acres, $25; for the best crop of Indian Corn, on not less than 10 acres, $25; for the best crop of Barley, on not less than 10 acres $25—for the best crop of Potatoes, on one acre, $10—for the best crop of Mangel Wurtzel on one acre, $20—for the best crop of Pumpkins or Squashes on one acre, fitted to withstand the winter *(reference being had in all cases to the mode of cultivation,)* $20.

No person shall be entitled to the Premium offered for Flax, Barley, or Wheat, unless he shall have declared in writing, before the 1st day of July next, his intention to contend for the prize—nor for Indian Corn, Mangel Wurtzel, Pumpkins or Potatoes, unless he shall have declared in like manner his intention, on or before the 1st day of August next.

BUTTER AND CHEESE.

For the best Cheese, not less than 100 pounds, made in Pennsylvania, $20—for the best preserved Butter, not less than 50 pounds, made in Pennsylvania, which shall have been kept at least 3 months, $20.

SUGAR.

For the best Sugar made in Pennsylvania, not less than 100 pounds, $10.

POT OR PEARL ASH.

For the best Pot or Pearl Ash, not less than 200 pounds, $10.

CIDER.

For the best Cider not less than 30 gallons, $10.

IMPLEMENTS OF HUSBANDRY AND USEFUL INVENTIONS.

For the best Plough $10—for the best Harrow, $5—for the best Winnowing Mill or Fan, $10.

Premiums will be awarded for such Inventions and Discoveries, as shall tend to facilitate the operations of Husbandry or advance the cultivation of the soil.

HOUSEHOLD MANUFACTURES.

For the best Linen Cloth, (for shirting or sheeting) 1 yard wide, and not less than 25 yards long, $15—for the best Linen Diaper, 5-8 wide, and not less than 30 yards long, $15—for the best Flannel, 7-8 wide, and not less than 25 yards long, $10—second best, 5—for the best Carpeting, 1 yard wide, and not less than 30 yards long, $20—second best, 10—for the best Hearth Rug, $5—for the best Woolen Cloth, 3-4 wide, not less than 20 yards long, $10—second best, 5—for the best pair of Blankets, not less than 2 yards wide, nor 2½ long, $10—second best 5—for the best Woolen Knit Hose, not less than 2 pair, $3—for the best Cloth made of Hemp, 1 yard wide, not less than 25 yards long, $10—for the best Man's Hat, made of grass, straw, chip, or other vegetable material, $5—for the best Woman's Hat, $10—second best, 5—for the best specimen of Raw Silk, not less than 100 pounds, $40.

All household manufactures and implements of husbandry, offered for premiums, must be deposited at the place of exhibition, on Tuesday, the 21st of October, before 6 o'clock, P. M.

It is explicitly declared, that *in every case,* where the Board of Directors shall consider the object presented unworthy of distinction, *they reserve to themselves the right of rejecting it,* although by literal construction it should be entitled to reward—and that in all instances, where premiums shall be demanded, they will require such evidence from the claimants, as shall be satisfactory to the Directors.

The trial of oxen, the examination of Farming implements, the distribution of prizes, and the sale of animals, will take place on the last day of the exhibition.

It will be at the option of the successful competitors for the highest premiums which shall have been awarded for neat Cattle, Horses and Sheep, to receive gold medals in lieu of money; and it will be at the option of those to whom premiums of the second class shall have been awarded for animals of the same kind, to receive silver medals in lieu of money.

No person will be entitled to a premium for any animal, of which he is not the owner at the time of exhibition, nor for any article of household manufacture, any implement of husbandry, useful invention, or product of the soil, whereof he or she shall not have contributed to the production or formation.

No person can become a competitor for prizes offered for animals or manufactured articles, who shall not have given notice of such intention, to one of the Committee of Arrangement, before 12 o'clock on Tuesday, the 21st of October; nor shall he be entitled to any prize, unless he shal have put the animal or article offered in the place assigned by the Committee for its exhibition.

No animal will be received after 10 o'clock on Wednesday the 22d of October.

At a meeting of the Directors held on Saturday the 12th of April, the following Committees were appointed.

For Stock—Manuel Eyre, Thomas Smith, George Sheaff, William Evans, George Blight.

For Products of the Soil—Job Roberts, George Holstein, Joshua Hunt, Samuel West, Aaron Clement.

For Manufactures—Stephen Duncan, John G. Watmough, John Elliott.

For Implements of Husbandry—Joseph Kersey, Moses Pennock, Reuben Haines.

And it was also *Resolved,* That a Committee of three Directors be appointed, to be styled the Committee of Arrangement, who shall have full power to publish in such manner, and form, as they shall deem fit, the objects for which the Society have offered premiums—to establish and declare the conditions upon which they are to be given—to make all contracts and arrangements necessary for the First Annual Exhibition—to direct and control upon the ground, all matters necessary to carry into effect the intentions of the Association. Whereupon,

John Hare Powel, John G. Watmough, and William Harris were appointed.

JOHN HARE POWEL,
JOHN G. WATMOUGH,
WILLIAM HARRIS.
Committee.

Extract from the Act of Incorporation.

SECTION 10. *And be it further enacted, &c.* That from and after the passing of this Act, if any person or persons shall bring ANY KIND OF SPIRITUOUS LIQUORS, CIDER, OR MALT LIQUORS, for the purpose of retailing, giving away, or vending the same, within the distance of *two miles* of the place where the Agricultural Meetings, or Exhibitions shall be held, except in stores or licensed taverns, he, she, or they shall forfeit the liquors so brought, or offered for sale, and on conviction before any justice of the peace of the proper county, shall pay a fine not exceeding ten dollars for the use of the Company incorporated by this Act.

CHEAT—CONTINUED.

Elmwood, July 8, 1823.

MR. SKINNER,

An essay in your No. 11, Vol. 5, signed "Plain Sense," with the avowed intention of combating mine on the subject of cheat, (published last April) serves, in my opinion, no other purpose than to prove more fully how deeply this error is rooted in the minds of some sensible men. I am therefore led, contrary to my intention, into the field of dispute, and I hope, at least, to push down some of the weak pillars with which he has supported this modern temple to equivocal generation. My arguments which he passes over, almost without notice, though not positive proof, were such as should have shaken the faith of an attentive observer of nature; and as some of your readers may not have the paper at hand, I will repeat them. 1. That a parallel case of the *true* production of cheat was to be found in the production of white clover, in almost any field dressed with wood ashes; and no person ever asserted that wood ashes was seminal, or ever pointed out the grass metamorphosed into clover by this alkaline dressing. 2. That in all the animal and vegetable kingdoms, there was no parallel to be found to this supposed change of wheat seed into bromus grass, merely by barometer and thermometer variations. 3. That two countries, unluckily for their superstition, had fixed on two distinct articles for their cheat,* thus multiplying each other's testimony, and subverting their theory. 4th. That the keen-eyed ancients, in the time of their glory—when this article was a great pest to them—when equivocal generation was in force, and when the prince of metamorphosis (Ovid) had touched the article in his immortal lines, never suspected any unnatural production. I will now add to these arguments a fact known to every settler in a new country, viz: that after clearing off a forest, a new and dissimilar set of trees are apt to make their appearance, whilst the most illiterate of these foresters, would blush to propose that the acorns of the oak and the nuts of the hickory had changed to the burs of the pines that succeeded; or that a generic alteration had ensued after they were sprung up. I must insist upon it, that an egg (and a seed is the egg of a vegetable) be it pure or hybridous, bears a strict relation to its sires, and therefore if a cheat seed, or a cheat plant, had any triticene matter in its composition, it would be as readily discovered as the jack's ears on a mule; wheat is a spike on a rachis, and if cheat was a hybrid, (the only rational supposition) we might expect a pretty close head, instead of a loose pannicle, and we should surely see in the seed an alteration from the true wheat. But I am straving into philosophy, and leaving superstition. I must, therefore, return to the charge.

If an egg does not contain the complete embryo of its future offspring, it is then a mere molecule, and may by heat, moisture, &c. capriciously be changed into a bird, a beast, or a fish, This absurdity would just lead us back to the chaos from whence the present glorious traits of philosophic truth have emerged. But the sound doctrine of *every thing living from the egg*, and *every thing producing after its own kind*, stands faster than the pillars of Hercules. These may sink and disappear in the sea, whilst those must survive the wreck of time. I perceive, that Plain Sense, has an advocate in E. B. a gentleman of Pennsylvania. He asserts that his seed wheat came up wheat, and then threw out a cheat head—was this a whim of the wheat, or of E B.? I wish he would next year tie a few of these plants to splinters, having first deliniated them well. I will engage that he will, before harvest, have to abandon his camp, and entrench himself under ground, where the operations of heat and moisture are not so tangible. E. B. by subdividing the sect, has done as much for S. V. S. as for P. S.—we may, therefore both dismiss him. My oponent thinks my only argument to be contained in the improbable assertion, that cheat seed may remain under ground a thousand years, and then vegetate.

It is worthy of remark, that seed may be revived by oxygenated muriatic acid, when thirty years old. It is too true that I cannot positively prove this. I am no Methusala to make such patient experiments, and even if an hundred years would be sufficient to convince him, I am still unable. Nevertheless, I know there are solid facts of greater difficulty that fully embrace this. It is well known that frogs have been exploded with rocks thirty feet beneath the surface, and that they have been inclosed in these rocks, rather longer than they naturally hold their breath. You will object to the rarity of these cases, but numbers could not add to the proof, even if they were raised up as thick as they once covered the land of Egypt, and I must confess, as few as they may be, I should be very unwilling to see all the frogs, and all the locusts, and other insects that may be now alive, and coeval with future crops of cheat, raised upon my land. I am so far, I think, at liberty, in this dispute, as to enlarge my boundaries, and take in every mode of propagation of the vegetable, whether seed, bud, slip, gland or root. Various roots have enlarged joints on them, and it has been supposed that a subterraneous life and growth may take place in these depositories, so as to throw out new shoots, and form new ganglions without a top; we see something of this in the lombardy poplar after severing the roots from the trunk, they live till getting air between the bricks in our pavements, they shoot up. The reigning crop must ever keep many articles beneath the sod; but when a free sun operates, and they absorb oxygene, they foliate. Dr. Darwin, on this account, probably adopted the idea that every joint in a stalk of wheat was an additional offspring, and a real distinct plant—and as of the plume so no doubt of the root.

Permit me now to examine those parallel metamorphose which you bring forward as grand pillars to support this modern temple, to equivocal generation.—First, the varieties of corn—are they greater than of our hogs?—Colour—shape—size—precocity. Surely there is no metamorphis in this; nor can we well say which is the most natural variety. The genera is untouched, and they will still be hogs, so long as we love bacon. When that taste fails they will no doubt die, but never become another beast.

The fungus excrescence that appears in corn, to the destruction of the part, is another of your metamorphosis.—Well, sir, I leave you to judge whether you think an animal has undergone any radical change, because he has an ulcer filled with proud flesh, and that substance alive with insects—and yet this is a perfectly parallel case—instead of insects, those in corn are young fungi.

I come now to your great pillar, by far, the most specious—the ear of corn on the tassel. However formidable to a superficial observer, I assure you that it will not bear the axe—it is but corn-stalk in all its constitution, and will soon yield to close investigation. To explain this phenomena, I must refer to a little botany.—Corn has two distinct generative issues—the cobs, the receptacle of the female; and the tassel, of the male: in these extra cases, there has been a transposition, and not a metamorphosis—the real cause of which I do not exactly know—whether a surplus of female juices, or a mere act of arrogance in her ladyship, who ought in modesty to have occupied the lower parts of the stalk, I do not pretend to say; but as in domestics, it sometimes so happens that the female assumes the upper hand, and in this place she always makes an odd figure, as in the corn—and moreover, is always in a peck of trouble when it is a little squally. Plain Sense may reject this explanation as too figurative—I am pretty sure the ladies will—but if so, I will give you another:—In these extra cases the corn has merely become a hermaphrodite in the tassel; a thing so far from being strange, that nine plants in ten are naturally so: and even the converse of this case takes place, viz: plants naturally hermaphrodite will have some species in distinct flowers, (diclines.)

And now that this great pillar has given way, methinks I hear the cumbrous superstructure rushing to the earth with its own weight, leaving nothing but a solitary *grafted* tree near it, that shaded its Portico. A few antiquarians and alchemists appear busy in picking up the rubbish; from one of the former I have the following story of the tree: "One of the ancients having a favourite young tree broken off by the wind, he was about replanting it, when it occurred to him that cuttings grew very freely in the ground; he therefore *rationally* concluded, that if he could stick one in a living stump it would be as ready to concoct the juices of the broken tree as the cruder juices of the earth—all his difficulty was in uniting them—and as he had seen fretted boughs adhere, he took the hint and cemented them easily, not doubting but the cutting would produce its own kind as much so as if stuck in the earth. But the curiosity so drew the attention of the old philosophers, who believed that all things were from the slime of mud and shells, that they purchased the curiosity, and there built the old temple of which this new one is a model."

S. V. S.

FOR THE AMERICAN FARMER.

ON REARING CALVES.

Mr. Skinner,

The attention of many of your subscribers being now turned towards the raising and improving of stock, I offer a few remarks upon the management of that part of a stock farm, which I think highly important: namely, the rearing of calves.

The rage appears now to be for large and fat calves; many persons allowing the milk of two cows to a calf, while others feed it largely with indian meal in addition to the milk of the mother.—This, no doubt, makes the calf larger than it otherwise would be, but what is the effect on the animal when it arrives at maturity?—What is its condition should it during the time it is growing, change owners and be put upon the ordinary fare of a farm: I do not mean a neglected farm, but one in good cultivation? It is utterly impossible for a farmer (who derives his support from his farm) to allow two cows to rear a calf, or give it large quantities of meal; and I contend, that it is not to the advantage of the animal that it should be so. A calf should be allowed a sufficiency of *new milk* to keep it in a healthy growing state, and when four and a half or five months old, should be entirely weaned. Indeed, it is preferable to take it from the cow at a week old (if the state of her bag will permit it) and let it be fed afterwards with new milk from a bucket. This makes it much more gentle than when allowed to suck so long, and prevents what we not unfrequently see, cows that suck each other, or a bull that sucks the cows.

In this I differ from most of those who direct the premiums for cattle shows. As there is generally a premium for the *finest calf*, without reference to what has been consumed in rearing it; perhaps, and most probably, it would not sell for what would cover the cost of its raising. The various premiums of an agricultural show, should be exclusively directed to that part, which is within the reach of every attentive farmer, and not allow premiums for unnaturally forced stock.

Premiums are also given for cattle having the earliest calves, and you may see *calves with calves at their side*. Why should a premium be given for this? It is the nature of the animal to take the bull at a year old, and nine out of ten will do it, if permitted. Why then should this be held out as any recommendation? By this system of forcing, no doubt, the calves are better grown, and better able to rear their young at two years old, but are the farmers better able to feed and force them, in the mode now used by some, or would they not make more profit, by feeding with moderate food, and wait until three years old for a calf, and would not the progeny of the animal be better? I contend that it would.—There is a great deal of fashion in most things, and this may do well for gentlemen with large fortunes, but it is entirely out of the reach of practical men, and will after a few years, be found so unprofitable and expensive, as to be laid aside by its most strenuous supporters. No man I think, deserves the character of *a good farmer*, who does not, at the end of the year, receive from his farm, more than his expenses.—How is he to live, possessing nothing more? Do not think by this, that I look with indifference upon those gentlemen of fortune, who annually expend large sums on their lands. Many of them deserve much credit, and do much good, in bringing into the country different breeds of animals, and which, without *them*, would probably never be introduced. My *object*, is to call the attention of farmers generally, to a mode of rearing stock, that while it gives every reasonable stimulus to the young animal, is at the same time, one within the reach of every *practical man*, and one from which he will be enabled at the same time to reap a profit.

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* *How much more difficult it would be to swallow this doctrine, were it transferred to the animal race, and why not? My neighbour A. says his hens eggs in very wet weather hatch young crows—B. says that his, in like case hatch hawks. C, that after the head comes out chicken, the bill bends, the eyes enlarge, and it turns to an owl. Would not even Plain Sense, (were he judge) tell these men—you are deceived—these are the genuine offspring of the voracious birds who have eaten your hens eggs, and deposited their own.*

I think it would be well in all premiums bestowed by agricultural societies, for young stock, to look particularly and attentively, to the mode of rearing.—No matter how large or how handsome an animal is, if to make it so, costs more than its carcase will bring in the market.

Calves, the first winter in particular, should be well sheltered, and have good hay. The usual mode of letting them run at large, is certainly bad. They are driven off by the older stock, get but a scanty supply of food, and in the ensuing spring, make a wretched appearance.

I have been accustomed to tying them in stalls the first winter. They take up less room, become more gentle, each gets his allowance without contention, and is more convenient to the feeder, bringing the stock into a small compass. My object is to *feed well*, and keep the young animals in a growing thriving state, without unnaturally forcing it; by which means I contend, it will make a more healthy and useful animal, and its progeny not subjected to the necessary ill health, that this unnatural forcing must in time, engender.

I believe animals are like man in this respect, and we have proof sufficient of the bad effects of too high living upon the human system.

An Agriculturist of Delaware.

From the Massachusetts Agricultural Journal.

ON THE CULTURE OF SEA KALE (CRAMBE MARITIMA,) AND OF THE SALSAFY, OR OYSTER PLANT, (TRAGGOPOON,) FOR THE MARKET, AND FOR PRIVATE USE. BY J. LOWELL.

We have introduced these plants some years since to the notice of our cultivators,.but there has been but small progress yet made in their use, and of course in their cultivation. This cannot have arisen from any dislike to them, because when introduced to the table, they are universally approved, and used. They are both favourites at European tables, and are accounted luxuries. The first is an earlier product than asparagus, and much preferred by those who relish the Cauliflower, which it resembles in its flavour. They have been sent to our market, but do not meet a ready sale, and of course, those who supply the market are not encouraged to raise them. It cannot be supposed that the taste of the people in this country is essentially different from that of the inhabitants of Europe.—The truth is, that we are contented with a much narrower list of articles of luxury than the taste of Europeans demand. *They* are not contented with potatoes only in the species, a new plant, even with them, unknown before the reign of Elizabeth. *They* require a new vegetable every month, and we are fast advancing to a state of luxury, which will require and demand variety. Even in England, two hundred years since, they could furnish no salad, but water cresses, and in our own country, thirty years ago, we were strangers to the Rhubarb, (Rheum Rhaponticum) which has now become an article of extensive culture, far preferable in many respects to the unripe goosberry, for tarts, puddings and preserves. It comes into use some weeks earlier—is raised with unfailing certainty and with trifling care—is perennial and abundant—is supposed to be more wholesome than the goosberry. It is now in general use, and constantly at market. We are indebted for its introduction to an amateur in Horticulture in the state of Maine. This example shows, that we may introduce something new, and that our horticulture was not at its highest point before.

The Sea Kale is a plant of recent introduction in Europe. Perhaps its culture cannot be traced back beyond forty years. It is a native of the sea coast of the southern parts of England, where it is found growing in sea sand.

It is very hardy—grows in any tolerable soil—is perennial, and costs not half the labour bestowed on asparagus. It may be raised from the seed or from the root, and fifty plants, occupying a very small space, will supply a single family. In its taste it resembles the Cauliflower. The only labour it requires is to cover it with sand, or earth, or with pots, or boxes in March, so as to exclude the light, and to blanch it, or make it white. If not blanched it is neither so beautiful to the eye, or so tender, or so delicate to the taste as if blanched. It should be thoroughly boiled and is better if boiled in milk and water. It should be served up like Cauliflowers, with melted butter. It comes in at a season in which our vegetables in this country are very deficient.

If in England and France where it has to compare at the same table with green pease, and spinach, it is admired as a luxury, can it be possible that it will not eventually succeed with us?

We shall be happy to furnish seeds of it to any persons who may be disposed to introduce it. I am not discouraged by the tardiness of its progress in coming into use; I have seen such changes in our horticulture, that I feel convinced, that we shall eventually have a vegetable market nearly equal to that of Covent Garden, though at present we are to be sure at a mortifying distance from it. One remark must impress itself, I am sure, deeply, on every man who is interested in such subjects, small to be sure in some views, but important in others—and that is, that if in older countries with milder and shorter winters, in which they give you green vegetables nine months in the year, they value such a plant as the Sea Kale, it must be of greater value to us, whose soil is bound in frost from the 10th of November to the first of April, and sterile till the first of May.

There is another reflection of some moment. Every new plant introduced for the table increases the comforts and diminishes the expenses of the middling classes of citizens. A vegetable market fully supplied, extends very materially the means of subsistence. Competition will produce abundance, and of course cheapness. The Sea Kale is easily raised, and endures forever. It requires no manure as the Asparagus does. It is indeed injured by it, and if our farmers in the interior had a patch of it in their gardens, they would have an earlier succulent vegetable to eat with their salted provisions, than any other they could raise.

The Salsafy, or Oyster plant, is another vegetable of easy production, and universally eaten, when introduced to the table. I know no one vegetable which is more esteemed.

Yet though it has been in our gardens for ten years, it has never been extensively cultivated for the market, and I think it is owing to its not being generally known. It resembles a small parsnip in its appearance. It is raised annually from seeds, and as easily, requiring no more care than the carrot. It bears a tolerable crop. In Europe it is eaten both boiled and fried. In this country it is parboiled, and then fried either in butter, or without. It forms an admirable garnish for boiled fowls or turkies. In its taste, it so strongly resembles the oyster, than when sliced and fried in butter, it can scarcely be distinguished from it. If our gardeners would introduce it into the market, and our citizens once try it, there would be no danger of its ever failing hereafter to be raised. It is in eating from November to May, precisely the period in which our vegetable market is most deficient in variety.

It is not possible for any one to believe without experience, how much we are below every part of Europe in vegetables. The great difficulty in introducing a new plant for the table, is, the want of attention on the part of the consumers. The raisers of vegetables are prompt, and attentive. We shall state one instance in proof of it.—A few sweet potatoes, raised here, (inferior to be sure to those of Carolina) were sold in our market at the price of two dollars per bushel. A great many applications were made for slips, but no one succeeded in keeping them over the winter. This spring, we found several of our cultivators for the market, had on their own account, and risk, imported them from the south, and are raising them with spirit. We have no doubt of their success. We are confident they will be regularly for sale in Boston market, from this time forward. We have had experience this spring of their hardihood. They encountered a severe frost on the sixth of May, after having been transplanted from a hot bed, where they were made paternally tender. They were cut down by the frost, but have started again more freely than the common potato. They are now one month earlier, than any we ever raised, and we feel no doubt that they will produce an abundant crop, and those which will not sell, will furnish the best possible food, for pigs, cows, and poultry. This is no speculative theory, but the result of four years constant observation and experiment. We have no idea of its being an object of general culture, but it will, and must form a part of the cultivation for the market, and of gentlemen, who feel a taste for horticulture.

From the Massachusetts Agricultural Journal.

ON GRASSES.

[*To the Recording Secretary.*]

DEAR SIR,

At your suggestion, that there might be some utility in publishing the result of some experiments made the past season upon the evaporation of certain Grasses, &c. in the process of drying or making, for safe and useful preservation; I herein inclose the same to you for such disposition as you may think proper.

The great object of research seems to be, what is that admirable process of nature, (as yet too little understood,) by which vegetable life is sustained and promoted? And how can this be traced or pursued so as to allow to human skill and ingenuity the nearest approach to the wonderful perfection of the great design? That this may be usefully done—that it is indeed partly accomplished, and that we are in full progression to this effect, cannot be doubted. The discoveries and improvements in those sciences, particularly in Europe, which have a reference to the theory of agriculture, have of late shed such a light upon the subject, and these have been so followed up by practice and confirmed by experience, that the result is indeed most auspicious, and marks the present age as an era of improvement.

But the process of nature is indeed subtle and mysterious, and can only be unfolded to the most earnest and diligent inquirer.

An accurate knowledge of the elements which compose vegetable life, and the different degrees in which they prevail in its formation, cannot be useless, in looking back for its origin and first principles. The tendency of most modern discoveries in relation to vegetation has been to shew the great prevalence of water in its composition. This has not only been made to appear by the analysis of plants, but it has to the astonishment of those who prosecuted those researches, appeared, that an acre of ground gave, according to its humidity, from 2 to 4000 gallons of water to the atmosphere in a day by evaporation only. The operation of this element has appeared so extensive, that it has led to the most delicate experiments, and induced some even to suppose it the sole source of vegetation.

A curious instance has been frequently published, of a willow inserted in a leaden vessel with a given quantity of earth, and supplied constantly with water; the willow thrived and acquired great growth and weight in a few years;—whilst on a subsequent examination of the soil, it appeared no sensible diminution had taken place.

It is observed by an ingenious writer,* to whom agricultural science is much indebted, "That although the mode in which manures operate on soil is not so obvious to the senses as to be fully understood, there are three ways in which water promotes their improvement. It preserves a favourable degree of temperature; feeds by conveying nourishing substances; and so as a pure element it is beneficial." To prove that water enters largely into the composition of vegetables, and is thus advantageous, the same writer observes: "That plants cut green, and afterwards dried, lose by exsiccation 66 to 70 parts out of 100."

The loss of weight by drying will be found in this country to vary very essentially from what takes place in Scotland, especially as it respects different plants. But our hay is of necessity made lighter by the heat of our summer, as well as for the purpose of its being stowed in large bodies snd tight barns.

It should be premised, that the time of cutting the several grasses, &c. in the following statement was the same as is usually practised by husbandmen in our State.

Of 100 lbs. of vegetables cured in 1822, the product was as follows, viz:

100 lbs.	of Green white clover,	gave of hay	17½ lbs.
100 ,,	of Red do.	gave	27½ ,,
100 ,,	of Herds' Grass,	gave	40 ,,
100 ,,	of Fresh Meadow,	gave	38 ,,
100 ,,	of Salt Grass,	gave	39 ,,
100 lbs.	of Mixed 2d crop on English Rowan,	gave	18¾ lbs.
100 ,,	of Corn Stalks,	gave	25 ,,
100 ,,	of do. cut in milk with the ear,		25

It is to be observed, that the weight will vary from ripeness, and many other causes, such as wetness of season, shade, thickness of growth, &c.

I am, Sir, with much respect, your's,

JOHN WELLES.

Dorchester, October, 1822.

FROM THE NATIONAL INTELLIGENCER.

AMERICAN WINES, &c.

Messrs. Gales and Seaton.—In my letter printed in your paper of the 26th ult. (taken from the American Farmer, which I did not intend should be published, but for Mr. Skinner to make an editorial article of, and the letters enclosed to him,*) I have asserted that, before the end of the present century, the Vineyards of the United States will add one hundred of millions of dollars annually to the agricultural products, which renders it necessary to give an explanation of my ideas on the subject; as I suppose there is not one person in five thousand that has ever reflected seriously on this business, or has any idea of the advantage it will be eventually of to this country.

We have it from the best authority, that the Vineyards in France produce, annually, on an average of years, more than *one hundred millions of dollars*. The extent of the Vineyards in France are about two millions of Arpents, which is about equal to one million and six hundred and ninety thousand of our acres. France, according to A. Young, and others, contains one hundred and thirty one millions of acres; consequently, there is about one acre in seventy-seven in vines, in the whole extent of that kingdom. The average produce is about five hogsheads, of sixty-three gallons each, on an arpent, or three hundred and fifteen gallons. A Vineyard, to produce, in the same proportion, on one of our acres, would be upwards of three hundred and seventy gallons

For the sake of comparison, I will select the state of Virginia, which, according to Morse's Geography, contains seventy thousand square miles, which at 640 acres to the square mile, will make 44,800,000 acres in that state, and which is a little more than one-third of the extent of France; and, instead of having one acre in seventy-seven in vines, the proportion in France, I will say Virginia will have *one in four hundred in vines*, which is less than one-fifth of the proportion in France, and will make one hundred and twelve thousand acres: and, at 370 gallons of wine to the acre, will produce 41,441,000 gallons.

Upon inquiry, I have it from the best authority, that there are wines in France which sell for six hundred crowns the ton of 250 gallons, which is equal to $2 64 per gallon, and other good wines sell in proportion, and greater quantities are not sold at higher prices than our cider. And, for the sake of brevity, I will state an account, which every one who chooses may vary according to his own ideas, as to price, &c.

1,000,000	of gallons of Wine	at	$2 00	$2,000,000
2,000,000	do.	do.	1 50	3,000,000
3,000,000	do.	do.	1 00	3,000,000
5,000,000	do.	do.	0 75	3,750,000
7,000,000	do.	do.	0 50	3,500,000
23,440,000	do.	do.	0 25	5,860,000

Total prod. at the prices above stated, $21,110,000 and a greater portion of it valued at a price (25 cents) which would generally be cheap as vinegar, or it may where it is not a pleasant beverage, be turned into brandy; and at an average of fifty cents the gallon, it will amount to the sum of $20,720,000; or even at twenty-five cents, will add $10,360,000 to the agricultural produce if the cultivation of the vine is pursued, and most of it may be got from lands that are now lying idle and useless. It will be a pleasant amusement for gentlemen to have from one to five acres, with the assistance of their house servants, without interfering with the labourers of their farms.

I have here stated facts from which gentlemen may make their own calculations, and draw their own conclusions; any one who will take the trouble of looking at a map south of the 50th degree of latitude, and east of the Mississippi, will see that there is more than sufficient extent of country in the United States to produce more wine and money at the lowest rate above stated, and to amount to a much greater sum than one hundred millions of dollars, even if there was but one acre in five hundred cultivated in vines.

JOHN ADLUM.

THE HESSIAN FLY.

This destructive insect is propagated from the eggs of the fly deposited on the grains of wheat when ripening: the truth of which I learned from actual observations. The fly may be seen by the middle of June, and from that time till wheat is cut, flying about and lighting upon ears of wheat. It deposites its eggs upon the outer ends of the grain, where they may be seen with a good microscope or optic glass; sometimes to the number of 6 or 7 on one grain.

They remain there till the grain is sown. The warmth necessary to produce vegetation is sufficient to animate the insect. It bursts its shell and enters the shoot, where it lies in a torpid state till the next spring, except in some instances when wheat is sown early, the fly commences its ravages in the fall: when this is discovered, the best method is to turn sheep upon it and pasture it short either in the fall or in the winter.

The most effectual way to check the propagation, is in preparing the seed before sown, which should be in the following manner;—Put your seed into a hogshead, tub or vat, and cover it with water; let it stand 10 or 12 hours; then put off the water, put the wheat upon a barn floor and sprinkle lime over and with a shovel mix it till it is well covered with lime. Let it remain in that state about 24 hours, and the eggs will be destroyed without any injury to the seed.

The following brief sketch of the observations which led to the discovery abovementioned, is given, that all who wish to be satisfied of the truth of it, may have ocular demonstration of the fact, if they will take the trouble. On viewing several grains of wheat in a microscope, something resembling the eggs of insects was observed upon them: 20 grains were selected with those appearances; they were put upon some raw cotton and a little earth in a tumbler of water, and observed every day; and on the day the grain opened and put forth its tender fibre, the insect burst from its shell and was not to be seen.

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* *Sir John Sinclair.*

* Note by the Editor of the American Farmer, to whom this seems to be a good opportunity to explain.—Major Adlum left the whole matter to him, to make of it if he chose, an editorial article—The Editor was very busy at the moment when it was necessary to send his letters to the printer, and he gave directions to have it all put in type that he might afterwards make, in the proof sheet, the little alterations that might be necessary, to give them an editorial form—unfortunately before the paper came out, he was called from home; so that the letter appeared in its original shape, including a paragraph expressly forbidding his publishing it in that way—when he returned, a good part of the impression was already off—but this ludicrous error was rectified as far as practicable, as soon as discovered.

Ten days after, five of the grains with their roots and blades were taken from the glass and carefully examined. In three of them the insects were found. The other 15 remained, and overspread the top of the glass. They were preserved till spring, when, on examining, every stalk had an insect in it, some two and one four.

Twenty other grains were selected, and the lime applied for 12 hours. It was then washed, and the color of the eggs was changed, and being put into a glass, in like manner as the other, the wheat grew, but the eggs did not produce.—The roots were transplanted and grew well, and ten bushels of wheat limed as above, produced a good crop, while the neighbouring fields suffered materially, and some were almost wholly destroyed by the fly.

A Farmer of Bucks County.

Among the many advantages to be derived from the *Tread Mill* it is stated that its salutary discipline completely *cures the rheumatism.*

To preserve Fruits and Flowers the whole year without spoiling.—Mix 1 lb. of nitre with 2 lbs. of bole ammoniac and 3 lbs. of clean common sand: then, in dry weather, take fruit of any sort, which is not fully ripe, allowing the stalks to remain, and put them one by one into an empty glass till it is quite full: cover the glass with oiled cloth closely tied down. Put the glass three or four inches down in the earth in a dry cellar, and surround it on all sides to the depth of three or four inches with the above mixture. The fruit will thus be preserved quite fresh all the year round.

Two ancient shields, which no doubt were worn in the celebrated battle of Shrewsbury, and which were ploughed up at Battlefield, are now in the possession of Sir Andrew Corbet, Bart. of Acton Reynard Hall. The one is a specimen of those worn by the horse soldier, and the other, of those worn by the foot soldier.

Shrewsbury Chronicle.

Editorial Correspondence.

Extract—Talbot County, July 8, 1823.

The wheat crop being now secured, we are enabled to judge accurately of its product.—It is certainly much better than was generally anticipated six months ago, and may be called a fair average crop of very good quality, but little having been injured by the uncommon rainy spell during harvest.

There are a few farms in this county which have made full and fair crops—many more that will not yield three for one; a few that will scarcely return the seed, and the great majority will average about a half crop—that finely cultivated and rich district of wheat land lying on Wye River, will scarcely average more than half a crop, and all the light soils have universally failed. This statement is said to be justly descriptive of the crop in Queen Ann's county.

The corn crop, although it has often been more forward at this season, never promised better until within a few days past; it has been almost universally assailed by the chinch bug, in greater quantities than was ever remembered. The wheat fields during harvest were every where remarked to be covered with this noxious and nauseous insect; and as soon as the wheat was reaped, they went over to the corn fields, and the stalks of corn are literally black with them. I consider the corn crop was never in more extreme danger of great, if not total loss; for there is no calculating the probable damage that may be occasioned by so extraordinary a quantity of this destructive insect.

Charleston, July 2, 1823.

DEAR SIR,

I received your letter of the 23d ult. enclosing a note from Dr. M. wishing an explanation of a paragraph at the conclusion of my communication which appeared in the American Farmer, No. 12, vol. 5, in these words: "That the land "was so completely raised, that nothing but a "very high spring tide could at all affect"—My meaning of the word "raised" was, that the land in its native state was so *high* as to be out of the reach of common tides, but by the removal of the original growth of trees, &c. and the immediate and constant cultivation of oats, barley, rye and corn, it *had sunk* so much as to admit freely the tide from the river, thereby putting it upon the same *level* with the rest of my tide swamp. I give the explanation with pleasure—it may, perhaps, prevent others from being at the trouble of making the same enquiry.

Permit me to request your attention also to two typographical errors—"Probability" of a plough drawn by oxen, &c.—It ought to be as it was in the manuscript, "possibility," altering the sense materially—also, near the conclusion, instead of, I ordered it to be "cleaned," it ought to be "cleared;" that is, the woods cut down and then cleaned.

CHARLES E. ROWAND.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at, and delivered from Smith's Inspection Warehouse, during the quarter, commencing on the 1st day of April, and ending the 30th day of June, in the year eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	2072	2	19	2074
Number delivered.	1057			1057

ROD'K DORSEY, Inspector.

TREASURY OFFICE, ANNAPOLIS, July 5, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at, and delivered from Sheppard's Inspection Warehouse, Baltimore, during the quarter, commencing on the sixth of April, eighteen hundred and twenty three, and ending on the thirteenth of June, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	997	5	7	1009
Number delivered.	1057	17		1074

LANCELOT WARFIELD, Inspector.

TREASURY OFFICE, ANNAPOLIS, July 7, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md

THE FARMER.

BALTIMORE, FRIDAY, JULY 18, 1823.

☞ The Editor will be thankful for a few Sea Kale seed—sound, and of recent growth.—They should be put up and sent in small parcels not exceeding half an ounce. They are for persons who have asked them of the Editor, and who wish to make trial of that vegetable.—Also, a small quantity of Guinea Grass Seed.

NEW YORK BOARD OF AGRICULTURE.

This institution was organized in the year 1820, under the patronage of the state of New York. By an Act of their Legislature, farmers within her borders, who form themselves into county Agricultural Societies, and raise a premium fund, are authorized to claim and receive a like amount from the State Treasury, provided that it does not exceed what was allotted to the county. The whole sum appropriated by the state to this object, is 10,000 dollars per annum.

The Board of Agriculture is composed of the Presidents or delegates of the county societies. It holds an annual meeting for general purposes at Albany, during the session of the Legislature, and transacts its ordinary business, at other times, by a permanent committee, aided by its officers.

The state requires that each society, that claims its patronage, shall obtain from persons who gain their joint rewards, an accurate description of the process used in cultivating the soil, and in raising the crop, or of feeding the animal, as may be, before such persons receive their premiums: and further, it requires that reports thereof shall be forwarded to the Secretary of State, for the use of the Board of Agriculture, who are authorized by law, to select, publish, and circulate valuable essays and reports, at the public expense, and also to purchase and distribute useful seeds or plants.

A liberal and wise government, has thus conspicuously placed before the Agriculturists of that great state, the most animating inducements to organize themselves into societies, which will become a powerful and active means to convey the best information, and most approved plants or seeds, even to the most retired farmers—to encourage all of them, to improve the breeds of their domestic animals, whilst they augment the fertility of their soil; and to induce very many, to engage in household manufactures.

The tendency of such inducements has been already, and most satisfactorily seen wherever they have been employed—the New York board has abundant reason to be encouraged, and we hope and believe, that they will continue to enjoy the support of their state, and the gratitude of their fellow citizens. They have imported the latest, interesting publications of Europe, to commence an Agricultural Library; they have procured from other countries, and distributed through their state, many useful seeds, and they have published two volumes of memoirs, for a copy of which we are indebted to the kindness of their President and Secretary, to whom, and with peculiar pleasure, we shall send in return, for the acceptance of their board, a complete sett of our Journal.

We feel that the Agriculturists of our country, are greatly indebted to those zealous and enlightened officers of that board. To the distinguished and munificent liberality of their President, Stephen Van Ransselaer, boundless praise is justly due—he has bestowed ample premium funds for several years, upon as many agricultural societies—he has caused geological surveys of counties to be executed and published, and is now pushing these valuable researches along the precincts of their grand canal, and he has offered a pattern farm, to the free acceptance of the state—but above all, are the agriculturists of this nation indebted to him for the pure and bright example, of unostentatious usefulness, which the liberality and exertions of this interesting citizen, place so broadly, yet so modestly before his countrymen; for who among us, can perceive his merits, and comprehend the scope of his designs, without wishing to co operate with a leader at once, so munificent, yet so unassuming—so active, and inquisitive, yet so retiring? The services of such men may be made extremely beneficial to society, and it behoves the rulers of these states, to patronize agricultural associations, which are, in their nature so well adapted to call such talents, feelings and means, into congenial and profitable operation.

To the secretary of the board, Mr. George W. Featherstonhaugh, a learned, enterprizing, and practical farmer, the people of New York, and of this union, are under heavy but grateful obligations for his persevering and successful efforts, to unfold the principles, and correct the precepts of our Rural Economy—for we owe to his labors the opportunity of benefitting, by the perusal of a well digested, and very instructive essay, written upon these important subjects, at the desire of the board of Agriculture, who approved and published it, in their first volume of the memoirs, of which it makes the chief part.—That the board could have obtained numerous communications from actual, and active farmers with which, to form their first annual volume, was not to have been expected—they, therefore, very judiciously sought at the hands of their intelligent and worthy secretary, an original essay that should furnish correct information, and useful advice, upon the various subjects of a farmer's hopes and cares. This they freely obtained, and promptly published, and it has undoubtedly been received by every body as a most acceptable substitute for a score of addresses that had been received by the board for publication; as these no doubt, were conformably to usage, mere fervid exhortations, to efforts and changes of *declared* importance, without a sufficient designation of the means of their accomplishment, or the evidence of their utility—errors which cannot too soon be corrected by our Agricultural orators.

But from the mass of addresses in the possession of the board, they wisely selected, that which Mr. Madison delivered before the Agricultural Society of Albemarle, Virginia, to complete their first volume; for as they have very justly remarked, "this address confirms his reputation as one of the most enlightened men of the age."

Their second volume of memoirs gives us the most welcome evidence of a growing zeal, for the advancement of Agriculture, throughout their state; and we believe that it may be very correctly ascribed to that spirit of emulation which the Legislative bounty, and judicious measures of the board of agriculture, have called into generous activity. Their second volume contains many interesting communications, from practical farmers, which abundantly prove the willingness of this great body of our population, to impart knowledge, whenever they can be persuaded to lay aside their characteristic diffidence, which alone prevents those who excel from publicly giving their advice to others—but this feeling invariably yields, when we persuade them of the useful tendency of such communications, and bring the obligation of each member of society to the test, under their consideration—of this fact we have had abundant proofs, in the progress of our Editorial labors, and we think that the New York board of agriculture, has also received sufficient encouragement, to induce them to call upon their fellow citizens, specifically, for any information that may be peculiarly within the power of certain persons, to procure or give—and if they will continue to employ their influence. in this way, we are satisfied that the farmers of this country, would have great cause to be grateful, for the many benefits which they would derive from the authentic answers that could thus be obtained, from men of experience, in every department of agriculture Already much useful knowledge has been unfolded by their efforts, and we hope that they will persevere as they have begun. That the rulers of their state, will continue to patronize such efforts, there is every reason to believe, when we advert to the objects of their solicitude, and the boundless advantages that must flow from the prosecution of their labors

The enlightened policy of their state, guarantees perpetual and ample patronage, to the board of agriculture, from whose future services, judging from the past, we anticipate great benefit to our countrymen.

The policy of that state, is worthy of general imitation; she fosters education, the sciences, agriculture, and internal improvements, with a munificent and enterprizing spirit, that will extend the knowledge, and augment the resources of her citizens, to a degree, that cannot now, be even faintly sketched, by the most sanguine mind.

How long will the people of her sister states suffer this example to remain, as if lost to them? Upon some, it imperiously calls, in modes that cannot be neglected with impunity—and we rejoice at it—we are glad that self-protection urges us and our neighbours to imitate her bold and wise policy. The work of improvement will thus *necessarily* proceed, and the enjoyments of society be augmented; universities, and primary schools; turnpike roads, and canals; agricultural societies, and pattern farms, are thus elsewhere assured of state support, by the noble example of New York.

In Pennsylvania and Virginia, the people are alive to the necessity of immediate and co-extensive efforts, and even in Maryland, we have felt the impulse of their movements—we have been driven to contemplations, from which much good may arise—a Canal from the Susquehanna linked with the lakes, and another from the Potomac stretched to the western waters, are *necessary* to the future prosperity of Baltimore—these would preserve it a great market, and their revenue would more than defray the whole expenses of the State Government. Shall not this common good be secured by a general effort? Will not the whole state embrace and execute the design?

But to return to the memoirs—we long since determined to make copious extracts from the first volume, and we shall still do it; nor will we make less free with many parts of the second volume; indeed, we would copy the greater part of each, if we did not feel obliged to consult the interests of many of our patrons who already possess these memoirs in their original form.

We will, in our next, lay before our readers the introductory letter to Mr. Featherstonhaugh's Essay, as a suitable prelude to other extracts, and an appropriate explanation of its origin; and, because it gives some account of the difficulties which the Board had to encounter, together with a fair view of the tendency of their labors.

TO CORRESPONDENTS.—"S." is informed that his remarks on the Fly, have been read with much satisfaction, and shall be inserted as soon as possible—The delay will not diminish the effect of his observations, and will, we hope, not prevent him from repeating his acceptable favours.

SEED, GRAIN, &C. RECEIVED FOR DISTRIBUTION SINCE LAST NOTICE.

From Commodore Chauncey, a small box of wheat, with the following note:

MY DEAR SIR,

I leave with you a sample of Chili wheat, which I have lately received, and I pray you to make such disposition of it as you may think best for the farmer's interest.

Your's truly,
I. CHAUNCEY.

LIMA BEANS, direct from Lima, sent to the Editor by Mr. Didier.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $6 75—sales—New wheat, $1 25 to 1 27—Red do. $1 42 to $1 43—Rye. 75 cents—Corn, 50 to 52 cents—country Oats, 40 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Buckwheat, none—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons 35 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $2 75 per bbl.—No. 2, $2 50—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 14 cts per lb.—Eggs, 16 cts. per doz.—Hay, $16 per ton—Straw, $10.

MARYLAND TOBACCO.—Same as last report.—Sales, 8 hhds. spangled and red, Mr. Notley Young, Prince George's $15—21 hhds. good red, Mr. Charles Hill, Prince George's $10—1 hhd. fine yellow, Mr. George Cook, Elk Ridge $49.—Highest price ever obtained in the state—this hogshead weighed but 276 pounds, each leaf had been carefully picked and ironed out, and the sample left at the office of the American Farmer, is of clear yellow, resembling gold leaf.

PATENT
Cylinder Straw Cutters.

The subscriber would respectfully inform the publick, that he continues to manufacture his patent CYLINDER STRAW CUTTERS at the usual place, 6 *doors above Eutaw, in Market-street*, and at his usual prices—(see American Farmer, vol. 4, No. 18, p. 144) which he warrants to cut hay and straw of every description, straight or tangled, and to feed themselves without difficulty; and also corn tops, stocks and husks, and likewise cane tops. He makes a large sized machine to be worked with two cranks, or by a horse, capable of cutting from 4 to 5 tons per day, with extra knives, price 100 dolls. Gentlemen intending to get either size of the above described Machines would oblige the subscriber by sending in their orders as soon as may be convenient.

JONATHAN S. EASTMAN,
Baltimore.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

AN ESSAY ON THE PRINCIPLES AND PRACTICE OF RURAL ECONOMY, WITH AN INTRODUCTORY LETTER TO THE HON. STEPHEN VAN RENSSELAER, PRESIDENT OF THE BOARD OF AGRICULTURE OF THE STATE OF NEW-YORK—BY G. W. FEATHERSTONHAUGH, ESQ.

[*Referred to, and promised in our last number.*]

INTRODUCTORY LETTER.

To the Hon. Stephen Van Rensselaer, President of the Board of Agriculture.

Sir,

I partook with yourself and the members of the General Committee of the Board of Agriculture, the regret which was felt on learning that the communications received from the county agricultural societies, at the close of the year 1819, were altogether insufficient for the purpose contemplated by the legislature, of forming an annual volume out of such communications, and of essays on agriculture. Yet when we reflect, that the establishment of a board of agriculture was an entirely new feature in the economical institutions of this country, and that many of the county societies might be fairly supposed unacquainted with the value of what they might deem a doubtful experiment, it may have been, and was probably anticipated, that few communications of interest could be expected during the first season subsequent to the enactment of the law. There was therefore a manifest propriety on the part of the general committee, when, in their first annual address to the county societies, they so strongly urged the necessity of an active correspondence with the board, and furnished them at the same time with the proper forms of schedules, with a view to have the annual returns made in a useful, constant and systematic manner. The ground work could only then be considered as properly laid upon which the superstructure was to be raised, and if the officers of those societies are careful to make their returns after the method suggested to them by the board, in a very few years the agricultural interest will possess in the annual volumes to be published by authority of the state, a faithful picture of the nature and progress of agricultural improvements, and of the resources of the state at large. We have cause to believe that the interest excited by this important subject is becoming general and that great advantages have been gained upon the state of apathy in which we were a few years ago, which point to profitable and enduring consequences, springing from the munificent law, hitherto, I believe, peculiar to this state.

It was at a period subsequent to the introduction of Fairs in this state, but previous I believe to the enactment of the law, that I had considered with myself what would be the most effectual way of giving the spur to the agricultural interest, which was at that time beginning to draw a large share of public attention; and being passionately fond of the vocation of a farmer, to which I am indebted for more health and satisfaction than I have possessed at any other period of my life, I committed occasionally my ideas to paper, and even entertained the thought of enlarging them into a form proper for public inspection at a favourable moment. When the subject of the publication of an annual volume was under discussion by the general committee, and various methods were suggested of filling the volume, in consequence of the insufficiency of the communications from the county societies, I took occasion to observe to some of the gentlemen of the committee, that since we were obliged by circumstances to eke out our first annual volume with detached essays from such sources as might be accessible to us, it would probably be more useful to present the agricultural public at once with a treatise on agriculture and rural economy: wherein the principles upon which a successful husbandry must always depend, should be familiarly explained, and the application of their necessary results be applied to the present condition of agriculture in the state of New-York. I thought that in a work of this kind, the nature of the connexion betwixt chemistry and agriculture could be unfolded to that class of plain men, who think much, although they say little, perhaps from being conscious of a defective education. Many individuals of the laborious classes of the yeomanry are unable to penetrate beyond the first intellectual difficulty, for want of slight assistance in the elementary parts of knowledge: and I have often witnessed the extraordinary elasticity of minds from which the pressure has been judiciously removed. This suggestion of mine led to many conversations, which terminated in my consenting to furnish for the first annual volume of the board of agriculture an essay after the plan alluded to, upon agriculture and rural economy. I shall here say nothing of my incompetency to do justice to the subject; but an imperfect attempt of this kind by an unpractised hand, cannot bring discredit on any man. It is my intention to throw into a familiar form the amount of the knowledge I have acquired on the subject, from books and from a somewhat extensive practice; not conducted, however, I confess, under the most auspicious circumstances; for with little previous knowledge that way, I commenced my operations in what was scarce better than a wilderness, and without an intelligent neighbour of any description to correct my errors by his advice or example. I would here content myself with remarking, that those persons who contemplate embracing a rural life, and I believe them to be very numerous, considering the condition of human business as it now stands, cannot be indifferent to what is here stated, that it is possible to acquire a great deal of health, of happiness, and some knowledge withal, by attending to rural affairs: and I feel that it would have been incalculably advantageous to myself, if proper views on this important subject had been thrown in my way when I first settled in the country, somewhat in the form in which I now contemplate to offer my own to the public.

To say that we are entirely ignorant of true agriculture, would be asserting too much; but it is true, that there are very few persons in the state, who have ventured beyond the humble operations in use amongst our least instructed farmers; and those few, I have the strongest reasons for believing, have not escaped the charge of being visionary and improvident. My first attempt to raise a field of turnips, ten years ago, under the drill system, was considered ridiculous. I was repeatedly assured they would not grow, and then if they did grow, what could I do with ten acres of turnips? But as to draining, and liming, and erecting threshing mills, all that was absolute ruin.—These opinions, no doubt grew out of the neglected condition of the landed interest. Commerce was the reigning occupation. Our merchants were the princes of the country; and farmers were considered but as their purveyors. Many of that small class of proprietors, who had retired into the country with slender means, had apparently not succeeded, for their necessary improvements had in most instances, absorbed their resources, and their occasional visits to the cities, were generally induced by the necessity of raising money; and thus they acquired the character of needy men, who were sure to be ruined in the end.—These opinions have gradually given way. Adverse circumstances have arisen in their turn, and convinced the reluctant merchant, that the true resources of the country are to be looked for in the land, and in the skill and industry of the farmer. This is a happy revolution in public opinion; and promises that notwithstanding the partial derangement of general affairs, the country will soon become prosperous and contented. It is true, we are but in the infancy of agriculture, as an art, and though many intelligent agriculturists are spread through the state, yet they are not numerous enough at present, to visit each other conveniently, or to extend sufficiently the knowledge of many improvements in husbandry, which are intrinsically valuable; these inconveniencies will be gradually corrected. It is probable, that henceforward, every year will add to the number of successful and intelligent farmers; and the moment it is perceived that any one man, or any particular set of men, succeed uniformly better than their neighbours, it follows of course, they will be imitated; and when that is done, the great point is gained, and the state will feel the benefit of it. To accelerate so desired a moment, it is just that we all contribute as we conveniently can to the general stock of information. The judicious enactments of the legislature, have made the efforts of the friends of the farming interest, comparatively easy. Never was munificent encouragement better timed, and I may add confidently, it has not been extended in vain. It is evident that the agricultural societies of most of the counties in this state, are rapidly gaining hold of the confidence of the people: it is universally conceded, that they have been productive of very beneficial effects; and those which have held their annual fairs for this year, have been attended and supported with greater spirit than the preceding year; and this unquestionably could not be, if the people had not had just reasons to perceive the utility of these institutions. All the accounts concur in stating that there has been an obvious improvement in the condition of farms, and a manifest anxiety on the important subject of improved breeds of cattle, sheep and horses. The institution, therefore, of county agricultural societies, and of annual fairs, is no longer to be considered a doubtful experiment, but is now entitled to be fairly pronounced a great salutary undertaking on the part of the community, which has produced unexpected advantages in a very brief space of time; and which only requires to be persevered in, with prudence and energy, to ensure benefits of the most lasting kind.

Example amongst farmers, is unquestionably a better teacher than precept; and I apprehend that it is principally by example, that a more perfect kind of husbandry is eventually to be established amongst us; yet a necessary consequence of the accumulation of examples or facts, is the disclosure of the principles out of which they grow, and to which they owe their constancy. A successful fact shews us, indeed, the possibility of the thing, and that we may hope to be equally fortunate, by imitating carefully the process which was observed to produce it at first; but the advantage is limited here, whilst a perfect knowledge of the principles upon which that fact depended, would, perhaps, teach that we might have been still more successful under the same circumstances, or have made a better use of the same means. An ordinary farmer observes his neighbour raising fine crops of turnips with fresh spring dung, which hitherto he himself has only used when it was a year or two old, and perfectly black and short. He therefore spreads his own spring dung on his wheat, which notwithstanding its luxuriant growth, is struck with the rust, whilst his neighbour's wheat raised upon a turnip lay, is sound. A moderate knowledge of the theory of this art, would have prevented his making this mistake. It would have taught him that the diseases of wheat are chiefly owing to insects; that insects deposite their eggs in innumerable quantities in rank animal dung, whose fermentation quickly hatches them; that the plants, too rapidly forced by the fermentation, become the easy prey of their enemies, who penetrate the soft straw at pleasure, and interrupt the determination of the juices to the head: It would have taught him also, what, perhaps his more wary neighbour knew, that there is a certain order after which all things are to be used, or confusion ensues; that the best way to keep spring dung out of the reach of flies, is to bury it in the earth in rows, where the fermentation and the evanescent particles, which under any other plan would be lost, would greatly tend to ensure a crop of turnips: and that the rank animal parts being thus expended, wheat might be safely and advantageously sown as the second crop. In short, a little book knowledge would tend to keep him within the rules of his art, and prevent him from making continual mistakes; whilst it would place within his reach numerous resources, of the existence of which he perhaps never dreamt. I think that no good argument can be maintained against some study of theory, as well as practice; that is, a theory sustained by facts universally conceded. Every farmer who is ignorant of the true theory of his art, is, at the best, a farmer very imperfectly informed, and will always be considered so. To argue, therefore, altogether against theory, is to argue against knowledge. But it will probably be objected, that there are already treatises on husbandry, and that if they have not produced good effects, it is in vain to write any more. Why good treatises have not produced corresponding effects it is not easy to say. Perhaps they have, in a partial degree; and what I dare say is perfectly true, is, that they have not been extensively read. The great body of farmers, for whose benefit they may be supposed to have been written, have hitherto not been in the habit of looking to books for agricultural knowledge; and I apprehend before that habit can be induced upon them, books of that description must be made more attractive. Few of the best English works have been re-published in this country, nor do any of them appear to me to be elementary enough. A treatise on agriculture, evidently the production of a man of great talents for the purpose, was published last winter, but it appears to have been very little read, and this does not afford much encouragement to one engaged in the same object. One circumstance, however, which has not been mentioned, has probably had its share in limiting the circulation of useful works upon agriculture. Ordinary farmers, particularly in these times, have not sufficient confidence in books to lay out their money upon them; and men of more intelligence, have been generally disappointed in agricultural works which have hitherto been published. They have too often found them immethodical, and have risen from their perusal conscious of that confusion of ideas, which invariably is occasioned by flinging even the most valuable materials injudiciously together. In some instances they are too scientific. The ancient history of agriculture, the profuseness of the technical terms of art, and the elaborate accounts of operations not fitted for their own affairs, forbid the hope that such books could ever become popular. It is probably owing to considerations of this nature, that many of the European works have not been re-published; and that intelligent men here, have not felt more interest in recommending the books to which they have had access.

The real capital of this state, is its land, which is to be made productive by the skill and industry of its inhabitants, who for all the purposes of a general statement, may be considered as farmers; and as must always be the case, in a country which is still in a state of progressive occupation, these farmers may be described as men with strong prejudices in favour of the simple agricultural operations practised by their fathers; the chopping and burning; the sowing and reaping, as long as the soil would make any returns. Men, too, with such limited acquirements from education, as belong to their stage of society. A very large portion, however, of the state has gone through the severe process of clearing and cropping, and has reached the first step, where agriculture, as an art, commences; which is, when the stumps are sufficiently decayed to admit of the plough passing freely through their roots. In this situation, there would be little encouragement for untaught and prejudiced men to pursue their vocation, if they were obliged to toil almost fruitlessly upon their exhausted lands, with the sole assistance of the scanty manure, furnished by a very limited and ill-provided stock. It is here, therefore, the absolute necessity of knowledge is apparent. A people fertile in resources, ingenious in discerning their interests, and constant in pursuing them, are capable of carrying rural economy to perfection in a very few years, if only their prejudices could be easily overcome. The liberality of our state government, has, I apprehend, obviated a very serious part of the difficulty, by providing that the annual volume to be published by the board of agriculture, is to be distributed to the county societies, at the expense of the state.* It is therefore probable that such a volume would be read, if put into proper channels for circulation, and that it would be of essential service to the country, if the contents were suited to the character of the people, and to the importance of the subject. On this head, there will undoubtedly be a difference of opinion; and from the moment I was obliged to deliberate upon the method which promised most utility, I have continually felt all the difficulties belonging to the subject.

I have before observed, that we are not entirely ignorant of true agriculture, although there are very few persons in the state who have ventured beyond the humble operations in use amongst our least instructed farmers, and I believe this to be strictly true. A great majority of the better order of farmers, as far as I am acquainted with the state, pursue habitually an agriculture at random: they pay it is true, more or less attention to manuring and perhaps generally get better crops than their less careful neighbours. But they do not even seem to suspect, that whilst they are carrying on their business so much better than others, they are really but pursuing a single branch of their art, and that only in an imperfect manner. They are yet to be taught that agriculture, or ploughing and sowing, is but a part of the true business which rural economy comprehends; and that this can never be made to flourish as it ought to do, without keeping a steady eye upon the natural order of the various branches which compose the whole system. There are, no doubt, thousands of resolute, industrious men, who notwithstanding the occasional success which attends their operations, feel that they are in the dark, and that they do not entirely understand their own business; they hear of novelties being introduced which promise great advantages, and dare not venture to imitate them, because being ignorant of the principles of their art, they are unable to form a judgment whether any experiment has even chance of succeeding; and therefore they remain contented with the sort of practical knowledge which a defective education and a very limited experience have furnished them with. There is a more vulgar prejudice which governs many men; a sort of conceit that they understand a thing perfectly well, and are not in want of advice: but I believe the advancement of knowledge has been more retarded by the absense of fair opportunities to acquire it, and that this circumstance has principally affected the most numerous and most valuable part of the community. If this be true, the remedy is at once apparent: it is to enable them to judge for themselves of the probable value of any novelty, by unfolding to them in a sound and intelligible manner the true connexion of all the principles which govern their humblest operations; by enlarging not their knowledge of facts, but of the remote causes of these facts; by giving them a general view of the economy of creation, and teaching them to think for themselves. If habits of reasoning upon such matters could be established, then indeed the experiments and facts which may be put into their possession in future publications may be eminently valuable; but I apprehend if the labors of the board of agriculture should be limited to publishing from time to time, detached essays and experiments in the various branches of husbandry, that the general condition of knowledge on such subjects would not be much changed. The people will read them with as much distrust as they have previously listened to other matters to which they have paid little attention. On this point, however, I have had it objected to me. that the people for whose benefit this volume is to be published, are not in a situation to receive knowledge of this kind; that it is impossible to explain the relation of principles to each other, as they affect agriculture, without entering somewhat into the domains of the kindred sciences of chemistry and geology, which men without education do not understand, nor can be made to comprehend in a brief treatise. To this objection as it concerns the people, I do not attach much importance: the difficulty must be to the writer of such a treatise, and not to the people. A long residence in the interior amongst plain farmers, with whom I have had constant intercourse, has convinced me that there is nothing lacking to them on the score of intelligence; and they can understand any thing perfectly well, and put it to the best use, if it is imparted to them in a plain and regular way, consistent with their own habits of thinking and acting. The many conversations I have held with men of this description, have long ago convinced me. that there is but one way of instructing farmers with a view of promoting the general prosperity: indeed it is impossible to hold any conversation with an intelligent man, anxious for information of a more enlarged kind than what he possesses, without coming at once to the difficulty which is here objected. An ingenious, yet unlettered farmer who lives in the neighbourhood of lime, yet has never dared to use it, hears of the extraordinary success attending its operation on land, and comes to witness it. After enquiring how and in what quantities it was used, he expresses his astonishment; he listens with anxiety to an account of the varieties of lime, and marl, and gravel, and sand: of the extraordinary fertility which is induced by mixing them in proper proportions with each other, or with other soils; he exclaims, "I see it is all true, but I cannot for the world imagine how it works." The condition of such a man is somewhat affecting. He stands upon the threshold of knowledge, and yet it is to him perfect darkness and confusion. It would shew little humanity to leave so ingenious a man in that situation, when, if we remove with a judicious hand the film before his eyes, he can fearlessly enter, and partake all the glories and blessings of the sanctuary of nature; there is no difficulty in this: a clear headed practical farmer, may be made sufficiently to comprehend enough of chemistry to convince him of the unerring truth of the principles which must always govern his vocation. In acquiring knowledge too of this kind, he will be enabled more distinctly to perceive that order which is established naturally in all the branches of his pursuit, and which he must observe if he follows it in the best manner. With his capacities thus enlarged, he will gradually come to consider the natural order of the economy of creation; the unvarying benevolence of design to man apparent in that order: his condition will be elevated, and he will feel in a more deep and constant manner, his great responsibility to the divine author of all things. Whatever may be said to ridicule the idea of imbuing the thoughts of plain farmers with a philosophical turn, yet if it is to be done, it would unquestionably lead to very beneficial results, and the sum of human happiness be thereby greatly increased. To such men, knowledge would be as wealth; and a just estimate of the real value of all the objects of human life, would tend to reconcile them to the humbleness of their lot; and teach them, perhaps, the most important of all lessons, contentment. With this explanation of the views which have governed me in ferming the plan of this essay, I shall now proceed to give a general view of the true relations of the branches of rural economy, necessary to precede the three divisions into which the essay naturally resolves itself.

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* *I hope the board of agriculture will deem it worth recommending to the county societies, that these volumes be judiciously distributed; perhaps it would be well, as the number of volumes for each county society will not equal the number of members, to add a volume to some particular premium, with injunctions to lend it to their neighbours who are members.*

FOR THE AMERICAN FARMER.

HESSIAN FLY.

The great complaints of the Fly in the present crops of wheat, induced me to look through the volumes of the American Farmer, and in other places to which I had access at the moment, to see what I could learn on the subject. And I must acknowledge myself unable to draw any rules for practice from all that I find.

There appears great variety of opinion on every point, excepting one; *i. e.* the place of deposite of the egg. Excepting two, all agree that the eggs are placed on the blade or leaf; these two assert, "from their actual observation," that the eggs are deposited in the grain while ripening.

Mr. J. H. Cocke, (American Farmer, Vol. I. page 295) says, the Hessian Fly deposites its eggs on the blades of the wheat indifferently, at from half an inch to three inches from the main stalk or central shoot, in the furrows which run longitudinally. He suggests grazing as a remedy.

"A Farmer," in a Baltimore paper of May 1817, asserts, that "from actual observation," the Fly deposites its eggs on the grain of wheat while ripening. It would perhaps be well for us that this should be the case; as it is probable, that steeping in brine and liming the seed, would eradicate the Fly.

"A Baltimore Farmer," in the same paper, says he sowed his wheat *late* in October, and at the time he wrote (May following) it was very much infested with the fly. He recommends *sowing in rich land.*

"A Lancaster County Farmer," (American Farmer, Vol. I. p. 382) says, he found the eggs of the insect in the root (plant) of the wheat, in the month of March, before vegetation had commenced; and in June they had again deposited their eggs in the wheat plant near the root, which was then beginning to shoot out the head. He approves the first week in October for seeding.

"A King William Farmer," (American Farmer, Vol. II. p. 127) is of opinion, that the fly deposites its eggs in the central blade in a few days or hours after the wheat comes up; and has no doubt that they continue to deposite as long as they live. He recommends early sowing, and covering at least three inches deep.

"William Merriweather," (American Farmer, Vol. I. p. 125) says, he has often seen deep covering of wheat totally destructive of the crop; and that deep seeding is not a preventive against the fly.

"James M. Garnet (American Farmer, Vol. II. p. 173) coincides with the King William Farmer.

"A Frederick County, Md. Farmer," (American Farmer, Vol. II. p. 135) says, it is a fact well known, that late sown wheat has frequently produced tolerably good crops, where more early sown has been much injured.

"Jeremiah Simple," (American Farmer, Vol. II. p. 159) says the Hessian Fly is *born with the grain.* When the grains are about half ripe, a small maggot may be discovered in every one of them. When the grain is fully ripe, the fly leaves it; and by the time early wheat is up, they are ready to deposite their eggs on the young stalk.—His rule is to sow after the fly has been killed by the frost, and covers at the usual depth.

"A Correspondent," (American Farmer, Vol. II. p. 200) says, very intense frosts do not kill the fly. And that in many instances of late years, the wheat last sowed, *i. e.* after hard frosts, has been more injured by the fly than that which was first put into the ground. He dissents from Jeremiah Simple's opinion, that the fly deposites its egg in the grain.

"Hezekiah M‘Clelland (American Farmer, Vol II. p. 234) says, the fly with its weapon, similar to the locust, opens or makes an incision in the tender wheat, blade, stalk, or grain, and there deposites its egg. And that early sown wheat always suffers most. That the fly is very hardy; he having seen them very active when the ground was hard frozen, and a large white frost—even the house-fly in his chamber quite torpid and helpless. And he concludes that they deposite their eggs at any time by incision.

In the American Farmer, Vol. II. p. 235, is stated "proof positive that early sowing will not answer. We had a frost last night; a fortnight since I observed the flies thick in the fields; this morning I could not find one."

Edward Tilghman 3d (American Farmer, Vol. II. p. 235) commenced seeding *Lawler* wheat the 18th September. The 5th of October, the first seeding being up, and having generally put forth the second blade from two to three inches, observed the eggs on the blades, and also the flies in numerous instances in the very act of making their deposites. As far as his observation had extended, they uniformly make their deposite from one to two or three inches indiscriminately, above the fork formed by the second blade with the first shoot, on the inner or ridged surface of the second blade, and in the cavity between the ridges thereof.

"Clodpole," (American Farmer, Vol. IV. p. 269) explodes the ridiculous idea of the egg of the fly being deposited in the grain. Opinion that early sowing is always best.

Dr. Isaac Chapman in 1797 said (American Farmer, Vol. III. p. 166,) the fly deposites its egg on the leaf or blade of the wheat, the latter end of April and the beginning of May, and the latter end of August to the 20th of September, when they may be seen laying their eggs on the leaves that have grown that season. They deposite them in the small creases that are longitudinal in the leaf. Upwards of twenty years' experience (American Farmer, Vol. III. p. 176) has convinced him, that the last three or four days in September, and the first week in October, is the best time for sowing wheat.

James Worth (American Farmer, Vol. II. p. 180, says the fly had completed the work of depositing its eggs on the 11th of October, 1819. He thinks it probable, that another deposite of eggs will take place early in the spring, and perhaps another between that and fall. (American Farmer, Vol. III. pages 187, 188, 189 and 213.) He recommends a change of course of crops; and to begin sowing wheat the last week in September, and finish the first week in October.

In 1822, September 2, I commenced turning in clover for wheat, and began to sow on the 17th of September, and finished this field the 1st of October. On an adjoining field I sowed wheat after corn, and began to flush it the 21st of October. The 24th began to sow, and finished seeding the 31st of October. The first field has some little fly in it, but not to hurt it. The other, the fly has destroyed perhaps a fourth. Both put in very handsomely, and both rich land. I sowed what is called the blue stem. In this one instance at least, the early sowing has succeeded best.

It is said that *fish pickle* put on the ground intended for wheat, appears to prevent the attack of the fly. I have heard of a field of wheat, part of which was dressed with pickle, and part not: the part not dressed has a great deal of fly, the other none at all.

The knowledge of the effect of the pickle cannot perhaps benefit any, but such farmers as live in the neighbourhood of fisheries; yet to inquiring minds, it may afford a hint that shall be of general utility. S.

June 30th, 1823.

THE HESSIAN FLY.

May 1817.

This destructive insect is propagated from the eggs of the fly deposited on the grains of wheat when ripening, the truth of which I learned from actual observation. The fly may be seen by the middle of June, and from that time till wheat is cut, flying about and lighting on the ears of wheat. It deposites its eggs upon the outer end of the grain, where they may be seen with a good microscope or optic glass, sometimes to the number of six or seven on one grain. They remain there till the grain is sown, the warmth necessary to produce vegetation, is sufficient to animate the insect; it bursts its shell and enters the shoot, where it lies in a torpid state till the next spring, except in some instances when wheat is sown early, the fly commences its ravages in the fall; when this is discovered, the best method is to turn sheep upon it, and pasture it short in the fall and winter. The most effectual way to check their propagation, is in preparing the seed before sown, which should be in the following manner: Put your seed into a hogshead, tub or vat, and cover it with water; let it stand about ten or twelve hours, then pour off the water, put the wheat upon a barn floor, and sprinkle lime over it, and with a shovel mix it till it is well covered with lime; let it remain in that state twenty-four hours, and the eggs will be destroyed without any injury to the seed. The following brief sketch of the observations which led to the discovery above-mentioned is given, that all who wish to be satisfied of the truth of it, may have ocular demonstration of the fact, if they will take the trouble. On viewing several grains of wheat in a microscope, something resembling the eggs of insects was observed upon them: twenty grains were selected with those appearances; they were put upon some raw cotton and a little earth, in a tumbler of water, and observed every day, and on the day the grain opened and put forth its tender fibre, the insect burst from its shell and was not to be seen. Ten days after, five of the grains, with their roots and blades, were taken from the glass and carefully examined; in three of them the insects were found; the other fifteen remained, and overspread the top of the glass—they were preserved till spring, when on examining them, every stalk had an insect in it, some had two, and one four. Twenty other grains were selected, and the lime applied for twelve hours; it was then washed, and the colour of the eggs was changed; and being put into a glass in like manner as the other, the wheat grew, but the eggs did not produce—the roots were transplanted and grew well. And ten bushels of wheat limed as above, produced a good crop, while the neighbouring fields suffered materially, and some were almost wholly destroyed by the fly.

A FARMER.

From the Federal Republican.

A writer in your paper of the 23d, asserts that *late sowing*, say "after the first frost," is a certain security for wheat against the Hessian Fly. He is unhappily deceived; and, that his unqualified assertion may not mislead others, I communicate, for public use, this fact—that I sowed my wheat (not five miles from Baltimore) *late in October* last year; it is now very much infested by the fly, and has a sickly appearance. Contrary, perhaps, to good farming, I sowed on a clover and blue grass sod. The field was also plastered early this spring, about a bushel to the acre.

The writer of this is of opinion, that the best security, under Providence, for a full crop, is to sow in rich land. Five acres well manured, are worth more than twenty of "pretty good land."

A BALTIMORE FARMER.

FROM THE NATIONAL INTELLIGENCER.

Buckland, Va. May 10, 1817.

Messrs. Gales and Seaton,

The ravages of the Hessian Fly, of which we have so general accounts this season, are certainly a subject of melancholy concern. As far as I have been able to learn, in all the counties of Virginia where the growth of wheat is sufficiently advanced to produce the discovery of the visitation of this insect, it has invariably appeared. And I now very much lament that some of my neighbours, or myself, did not, last year, give publicity to the facts on the subject, which for several years have been known to us, and of which the present year affords additional evidence.

About five years ago, a kind of wheat was introduced into this neighborhood, which has been found, by invariable experience, to resist the fly. It was brought here by James Lawler, in a small quantity in his saddle-bags, from Chester county, Pennsylvania, where he had been on a visit to his friends. He stated, that it was there called Jones's White Wheat, and had never been infected with the fly. From this circumstance considerable attention was paid to the propagation of it. The second year after it had been cultivated in this neighborhood, I was so fortunate as to get five bushels of it; I sowed it on one side of the field of about 120 acres, the balance of the field in the golden beard; there was no difference in the soil, and the Lawler wheat produced eleven for one, while the other did not exceed three for one. The fly that year was very fatal, and the golden beard, which was sowed much more thick than the other, became, after the commencement of spring, thin and scattering, and continued to decline in prospect; much of that which had survived falling till it was harvested, while the Lawler wheat grew to a fine height, and was without any fly in it.

I sowed the succeeding year my product of fifty-five bushels, and twenty more, which I obtained by giving four bushels for one. I sowed that year 270 bushels of different kinds, and made as much from the seventy-five of Lawler wheat as from all the rest, for that was also a fatal year to the general crops, from the ravages of the fly. I afterwards sowed my whole crop of the Lawler wheat; but the last fall, being lulled into a false security, from the circumstance of the fly not having made its appearance the preceding season, I sowed a portion again of the bearded wheat, in order to divide, for convenience, the time of the harvest coming in, as the Lawler wheat comes later than any, except the old yellow bearded wheat generally in use some years ago, and is about as late as that. But this year has again more fatally testified to the value of the Lawler wheat. I have almost wholly lost my seeding of the golden beard, while the other has continued to grow in proportion to the benignity of the season, and has a perfectly healthful appearance, without the trace of any fly; while in that adjoining it, of a different kind, you may immediately see deposited in the stalk, six, eight, or ten of the embryo. Among my neighbours, as far as I have learned of the state of their crops, the same result has occurred. The Lawler wheat is invariably exempt from fly, and every other kind is invariably destroyed.

Experiments were, in the first three or four successive years after its introduction, made of its efficacy, with the most satisfactory success. I will only mention one:—Mr. John Brown, in the fall of 1814, sowed equal quantities of the purple straw and Lawler mixed; the fly commenced its depredations as usual in the spring, and by harvest scarcely a straw of the purple wheat was left, while the Lawler remained alone, and apparently uninjured.

Of this valuable wheat much was this year ground, the anxiety to get of the seed having subsided, from the favourableness of the last season. At some other time it may be proper to assign the reason of this extraordinary exemption, if indeed they can be satisfactorily traced, (of which there is much doubt,) if not, we must content ourselves with the utility of knowing the fact.

To those who cultivate it, my experience would lead to the recommendation of sowing it thicker than usual, although it branches more than is common, and of plastering it in broad cast early in the spring, in preference to any other mode, both as means of sustaining its maturity, and enhancing its increase, it being a late wheat and of tall growth.

A SUBSCRIBER.

From the Federal Gazette.

Sir,—I have promised more than once, to send you an account of the mode which is successfully practised in England by all good farmers, of preparing seed wheat, with the view of preventing the disease called smut. I now beg leave to trouble you with the fulfilment of that promise.

I call upon all farmers, by every motive of public and private interest, to attend to it, and put it into practice. It may not be improper if I make a few preliminary observations. The nature of smut is well enough known to practical men, but to others it may not; the ear, instead of being filled with sound grains of wheat, is filled with little black balls, which being broken betwixt the finger and thumb, yield a most disagreeable smell, unlike any thing that I know of in nature. The powder of these balls, which get broken in the operation of threshing out the wheat, is supposed, and I believe truly supposed, to impregnate or inoculate the sound grains, and thus the evil is propagated and extended. The preparation of the seed is intended to destroy the inoculating power of the infectious black powder of the smut balls. A number of expedients have been tried with this view, and none, I believe, has been found so effectual as that which I will presently describe. What the true history of this remedy is I cannot answer for, but have often heard the following anecdote:

That a ship laden with wheat happened to be sunk in the channel; that some of the cargo was got up, and though damaged so as to be unfit for the mill, some one thought it might possibly do for seed if sown immediately, and accordingly some of it was sown. It was remarked the following year with surprise, that the crop from this wheat was free from smut, in a neighbourhood where smut abounded all around, and it was obvious to conclude, that it was owing to the seed having been steeped in sea water. Whether this was the origin of steeping in *brine*, I cannot tell, nor is it material now; it has become the almost universal and invariable practice with good farmers in England, *to steep their seed-wheat in brine*. The following decisive experiment was also made to ascertain the efficacy or non-efficacy of brining:—Some clean wheat was sown dry, (not brined) and some of the produce of this the following year, also dry, and so continued for five years, the smut gained ground every year, and the fifth year it was nearly one third smut; this smutty produce was then brined and sown, and the brining applied every year for five years in succession, and the disorder was completely cured by it, so that the sample was as clean and good the tenth year, as it was the first. This experiment seems to be complete and decisive, and corresponds entirely with my own experience.

I come now to describe the manner of proceeding in making the brine, and also of using it, and of preparing the seed for the field.

1st. As much salt is to be put to water as will make it strong enough to swim a new laid egg, bold and well up. [I did not attend to this, but put as much salt as the water would dissolve.]

2d. The wheat must be steeped in this brine at least *twelve hours*.

3. It is then to be put on a clean floor, and hot slacked lime sifted over it, sufficient to separate the grains of wheat; and candy, as it were, every grain with a coat of lime: to do this, it must be well turned, and stirred with an iron shovel; in this state it is to be taken immediately to the field, sown, and harrowed in; or if early in the season it is sometimes ploughed in.

OBSERVATIONS

The most convenient practical manner of performing the operation of brining is as follows:—Procure a tub of any sort that will hold as much wheat as is likely to be wanted for any *one day's sowing*, as 4, 6, 8, or 10 bushels; mount this tub upon a stand, so that the brine may be drawn off by a spigot and fawcet into another tub below; then put your wheat into the upper tub at six or seven o'clock on the morning of the day before you intend to sow it; the brine having been previously prepared in the lower tub, is to be ladled up into the upper tub upon the wheat, till it is quite covered an inch or two; let it stand in this state all day, and at night, the last thing before going to bed, take out the spigot and let the brine draw off all night into the lower tub, (by this means the brine will not be unnecessarily wasted;) the next morning the wheat must be taken out, and limed with the hot slaked lime as before described. Flour barrels with one end out, are very convenient to carry the seed to the field.

Before putting the wheat into the upper tub, recollect to place a wisp of straw on the mouth of the fawcet to keep back the wheat when the brine is let off.

Observe, the *time* is every thing in this operation. I have heard many assert, that brining was of no avail; that they had tried it, and found it fail. But I always found, upon strict enquiry, in every instance of this sort, that the operation was imperfectly done, and chiefly with regard to time. Farmers will do well to see to this operation themselves.

As this is the season for sowing turnips, I will here give a method of preventing (at least in a useful degree), the ravages of a fly called the turnip fly. Wet the turnip-seed with *linseed oil*, stirring it till all is wet, then add as much flour of brimstone as will completely separate the seed, and coat it over. As the first leaves of the plant are formed by the opening of the seed itself, and as the injury is chiefly done by the fly to the seminal leaves, the brimstone and oil will defend them from attack till the rough leaves are thrown out, and the plant escapes.

I am sir, &c. S. B.

Light-street.

FOR THE AMERICAN FARMER.

PLANTATION OF TIMBER.

Mr. Skinner,

Having lost my mother at an early age, I was sent to her parents, to receive that care which a widowed father could not bestow on my infancy; and being in the vicinity of the Valley Forge, in Chester county, I witnessed the destruction of the timber of that estate, and of several adjoining ones, by the continental army hutted there in the winter of 1777. Every tree was cut down, and all the fence rails taken, to shelter and warm those heroes, who, though unable to prevent Sir William Howe from entering Philadelphia, were willing to brave the inclemency of a winter season, badly clad and badly fed, to keep him prisoner there; so that the proprietors, unable to enclose their grounds immediately afterwards, and scarcely able to purchase fuel, considered themselves utterly ruined. The effect of their complaints remained impressed on my mind, until I went to Europe in 1791, and induced me, while there, to make particular enquiries how those old countries obtained continual supplies of an article so indispensable for domestic and manufacturing purposes.

I learned with astonishment, that there was not probably one single tree in England or France, but had grown from the stump of another tree, which had been planted by the hand of man; or was itself one of those identical monuments of human industry, patience and foresight, in planting.

The planting of chesnuts, and most other tree seeds, was as familiar to many, as the planting of corn with us; and except the aquatics, which are grown from cuttings mostly, and the evergreens, whose little seed are put in beds and transplanted, is preserved very much in the same way, both objects requiring a preparation and protection well known to farmers. Of these, however, I have given some details to the Agricultural Society of this State, from a translation of a French treatise, and which they may one day give to the public. The want of timber will not be so much felt in the United States, whilst the increased population is spreading over the immense forests of the west, as to require a knowledge of the science; except as concerns those who are proprietors of grounds on the borders of fresh water streams, which render the clearing unhealthy; or others, who have cleared, hilly, broken or stony grounds, fit for timber, and fit for nothing else. But the science of cutting to grow again, if it may be called a *science*, should be known to every farmer, planter or proprietor, because the weight and value of the article will not allow of much transportation; and the advantage of a second growth *on the spot* is superior to trees already grown at *a distance*, if all had means to spare to procure them. There is nothing mysterious, or difficult, or costly, in procuring the second growth of trees of the common kind, and in greater quantities than the first growth, as the experience of every iron master in the country has shown; and indeed, those very farmers about the Valley Forge, who had witnessed the cutting of the timber by the owner of that estate for years, and who were so much alarmed at their situation and prospects in 1778, were, on my return in 1799, abundantly supplied by wood of second growth, and as rich and contented as ever. Patience they found of necessity; observation of what had passed so completely under their eyes, was all that was wanted.

What is most essential here now, perhaps, is a disposition to look to futurity—to PROVIDE IN TIME; but, I will add, from what I learned and saw abroad,

1. That the felling of trees is confined to the winter season; or rather, to that time in which the sap is under ground.
2. That every tree, young and old, on a certain space, is cut in the same season, for old dead stumps do not re-produce.
3. That they are cut as smooth and level with the ground as possible; and
4. That, while young, they are kept from the browsing of cattle.

Your very obedient servant,
THOMAS W. GRIFFITH.

Baltimore, July 11, 1823.

From the Massachusetts Agricultural Journal.

ON RAISING THE OAK FROM THE ACORN, AND THE BEST MODE OF DOING IT.

[By the Editors.]

It is very extraordinary, that, notwithstanding the Massachusetts Agricultural Society has for thirty years offered great premiums for the culture of the oak in plantations, and especially since the legislature enjoined it upon the several agricultural societies throughout the state, to offer premiums for the raising of forest trees, but two claims should have been made. We can only account for it on one of the following grounds; either that the premium has not attracted the attention of our farmers, or that they have not sufficient spirit and enterprise, or that they are averse from any new culture, however important and reasonable. We shall take the article of White Oaks, which were selected by our society, as being the most valuable timber of the Northern States.

The premium offered in 1822, for one acre planted with white oaks, and found to be in the best state in September 1823, (that is, at eighteen months old,) was 100 dollars per acre. The average price of good land throughout the state does not exceed twenty dollars per acre. The expense of raising seedlings of eighteen months old would not exceed twenty dollars more, if the following account be correct; indeed, we believe it would not exceed ten dollars, as we can see no reason why the expense of planting an acre of acorns should exceed the expense of planting an acre of corn. There would be left then, of clear profit to the raiser of an acre of oaks a profit of sixty dollars at least for two years culture, and as is remarked in the following article, a crop of grain may be raised at the same time sufficient to pay the whole expense. Have we no man in the state who is spirited enough to set the example, and carry away the honour and profit? The acre of oaks will *afterwards be his*, and there is no mode in which he could employ his land to so great advantage. It will not surely be said, that our farmers *cannot spare any of their land*, when our great error consists in holding more than we can, or do cultivate *well*.

On the mode of raising the Oak, "from Hunter's Notes on Evelyn's Sylva."

"Having the ground properly prepared, by breaking it up and reducing it to a fine tilth, either by potatoes or repeated ploughings, and having a sufficient quantity of acorns, all gathered from the most vigorous, healthy, and thriving trees, proceed to the setting them in the following manner. In the month of February or March [but in this country we say *from experience*, the months of November or December, if the latter month be open,] let lines be drawn across the ground for the rows, at the distance of four feet from each other; but if this be thought too great an interval, the rows may be made three feet, in which case the acorns must be put down at a greater distance from each other. Then having sticks properly rounded to make the holes, [a common dibble] plant the acorns in rows at ten inches asunder. Let them be put down about two inches below the surface, and see that the earth be properly closed upon them to prevent mice or crows from injuring the seed. In some places it is customary to sow the acorns after the plough in furrows; but where the ground happens to be stiff, great care should be taken not to cover the seed with too thick a furrow.

"The first year after planting the acorns, the weeds must be kept down by hoeing and hand-weeding; and this must be done early in the spring, before the weeds get so strong as to hide the tender plants, which would occasion many of them to be destroyed in cleaning. It is also the cheapest, as well as neatest husbandry, to take weeds down, before they grow too large; for though the ground may require an additional hoeing in spring, yet the weeds being hoed down when young, a man may hoe over a great quantity of ground in a day. Weeds cut in their tender state immediately die; whereas, when they are old and strong, they frequently grow again, especially if rain falls soon after, they perfect their seeds in a short time, and thereby injure the whole plantation.

"The second year of their growth, the common plough may be made use of, to cultivate and keep the ground clean. [Or potatoes might be raised between the rows, if proper care be taken not to trample on the plants.—Editors.]

As these acorns sometimes fail, the author proposes a nursery in the same field, to supply the deficiencies.

"Having then given directions for the raising of wood, I proceed," says the author, "to their future management. And first, the rows being four feet asunder, and the plants two feet apart in the rows, they may stand in this manner for twelve or fourteen years, when every second plant may be taken out, and sold for hoops or poles. After every second plant is taken away, let the roots of those taken away be grubbed up, to give the remaining plants more room freely to extend their roots. The plants being now four feet apart each way, they will require no more thinning for seven or eight years, that is, till they are twenty years old, when the healthiest and most thriving trees must be marked to stand for timber, and the others cut down for poles, and their roots left to produce future underwood.

"The oak will grow and thrive in almost any soil, if properly planted, though it cannot be supposed that their success will be equal in all places. A rich, deep, loamy soil, is what oaks most delight in, though they will grow exceedingly well in clays of all kinds; and in *sandy soils, in which* last, the *finest grained timber is produced.*"

The author then proceeds to inquire, which of the different modes of raising oaks produces the best timber, from the acorn, the seed-bed, or the nursery. Mr. Evelyn decides in favour of *planting the acorn*, and Mr. Hunter adds, that whoever will look at the woods which were *sown*, and compare them with those which were *planted from nurseries*, will not hesitate a moment to declare in favour of Evelyn's opinion.

What are the obstacles to our following this excellent example of the great farmers of England, in the age in which our ancestors emigrated? Is it because we are too impatient, and unwilling to await so tardy a return? Yet there are constant pleasures in the annual growth of our forests; they seem to be the work of our own hands, at least of our own providence and care. They are subject to fewer hazards, and their profit is certainly greater than that of any other employment of capital on land. Or is this aversion to planting the effect of an hereditary prejudice against trees? Our ancestors found *their extirpation* their *greatest labour*; and do we continue to feel their prejudice, when woodland is far the most valuable, and must constantly increase in its comparative value?

WATER PONDS FOR THE USE OF CATTLE AND FOR OTHER PURPOSES.

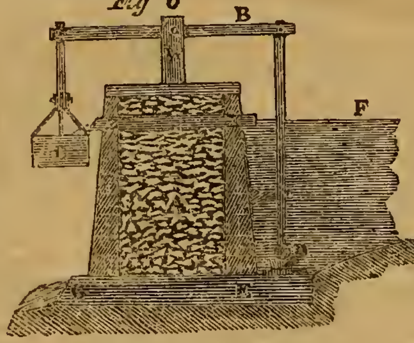
☞ Our attention has been invited by several judicious correspondents, to the consideration of the means of accumulating, and of economically using and applying WATER—for all the various purposes for which it can be wanting on a farm. —The necessity of the case is, in fact, forced upon public attention, by the great change which has of late years taken place in our seasons—to such a degree is this change felt—perhaps more especially in limestone districts of country, that it has really become an object of pressing importance to husband *rain water* for the sustenance of live stock, if not for common culinary purposes.

In contemplating this item of rural economy, a wide field is spread before us, requiring no less than a knowledge of the laws of Hydrostatics to an extent beyond our limited acquirements.—In the feebleness of our own lights, we must then borrow from the labors of others—we do not know to what extent we may be led, but we shall endeavour to select for our readers, such views and facts, as appear to be of *practical utility*, beginning as we now do, with remarks on the construction of DRINKING PONDS for cattle.

Edit. Am. Far.

The management of the water of ponds is often very troublesome and inconvenient in the time of heavy rains or floods, from the want of proper means or contrivance for letting it off. The following is the sketch of a very easy, convenient, and effectual method of discharging the over abundant water from all sorts of ponds, basins, and reservoirs, without the necessity of attending to them at such seasons. It is the invention of Mr. Ley, a very ingenious clergyman in the county of Devon, in the agricultural report of which it is described. The plan of it is represented at *fig.* 6, Rees' Encyclopedia, article *Ponds*; in which A is the head of the pond; B, a beam of wood, suspended by an iron pin on the block W, so as to form a sort of lever, or balance, having attached to one end of it the box C, which is made so as to be rather leaky, and to the other the plug D, which when the water of the feeding stream, or from rains, rises to the level of the surface of the pond F, is conveyed through the trunk or gutter, X Z, into the box C, by the weight of which the plug is drawn out, and the water carried off by the trunk E, at the bottom of the pond, as seen by the letter G. On account of the box, C, being so constructed as to let out the water very slowly, by the time the whole of the water has been discharged from the pond, basin, or reservoir, it will likewise have escaped from it, when, by the weight of the beam and plug, the empty box is raised, and the plug again placed in the trunk in its former situation.

Fig 6



It is evident that, from this ready method of getting quit of the water, no mischief can ever be sustained by its sudden rising and overflowing the banks of the ponds or other excavations; accidents which, under other circumstances, not unfrequently happens, to the great inconvenience and injury of those to whom they belong.

The importance and necessity of water, in all pastures, is self-evident; as cattle cannot live without it, and the driving of them far for it, is known to be prejudicial to their health, in hot weather, besides being attended with great trouble and a considerable loss of time. This is so sensibly felt in many parts that people are obliged to dig wells, even to such a depth as frequently to require the assistance of a horse to draw up the water. The means of rendering it easily come at, must therefore enhance the value of the land where it can be procured, and are of very essential consequence to the husbandman.

Where the surface of the ground is sand or gravel, there seldom is occasion to dig deep for water; because such soils generally lie upon marle or some other rich earth through which the water cannot descend. Beds of clay are most commonly thicker than those of sand or gravel; and chalk is, often, the thickest of all. But wherever water is wanting the farmer should bore through the incumbent earth, if he intends to fit his land for pasture; and if he finds the expense of obtaining it too great, his best way will be to convert the ground so circumstanced into arable, or to plant it with timber trees suited to the nature of the soil.

Various indications of the presence of water below the surface of lands have been suggested by the ancient writers on husbandry; such as the spontaneous growth of different aquatic plants, vapours near the surface, &c. but the best mode of ascertaining it is by boring: and about the latter end of August, when the ground begins to be a little moist, is probably the most proper season for the purpose.

But in whatever method water is found, the means of coming easily at it are the next consideration. If it be on a plain, there is no other way than digging a well. In doing this, the substance under the sand or light soil must be dug into, to form a reservoir of water for occasional wants; and this reservoir should be made deep and large in proportion to the quantity wanted. If there were no such reservoir, the water, after having risen a little above the impervious body underneath, would glide along its surface, as usual, and very little of it then could be obtained, either by pumps, buckets or any other way employed to raise it. If the well is made in a sloping ground, and the declivity is sufficient to give it an horizontal vent, it will be worth the husbandman's while to dig such a passage, and by means of pipes, or any other conveyance, to carry the water across the light soil, through which it would otherwise sink: the greatest quantity of water will be obtained in this manner, because there will then be a continual stream.

If the soil is very deep, and its surface has inequalities into which rain water runs in any quantity; this may be collected in ponds made in the lowest parts of such ground.

If a body of clay is found near the surface, it is worth the farmer's while to bore, that he may know at what depth a bed of sand or gravel may be met with; for he will be sure to find plenty of water in this last. If this be in a declivity, he need only cut an horizontal passage, and the water will flow so freely, as even to double the value of his land.

Here again the farmer needs not ever to be at a loss, because it cannot be very difficult to make a pond in a clayey soil, which is, of itself, retentive of water. But it may perhaps be advisable, even in this, to cover the bottom of the pond with a coat of gravel, in order to prevent its being poached by cattle, whose feet would otherwise be apt to sink deep into the clay. Some farmers judiciously pave the declivity by which the cattle enter into the pond, and this renders it much more lasting than it would otherwise be, and preserves the water clean.

When ponds are made in a loose soil, much more care is necessary. The bottom and sides must be covered with a thick coat of the toughest clay, from a foot to two feet thick, well rammed down. Some have added hair and loam to the outer part of this covering, with a view of rendering it less liable to chap: but a thick coat of gravel is more necessary here, that the feet of the cattle may not pierce through the clay. Perhaps the expense of paving the whole inside of a pond might, in the end, be money well laid out.

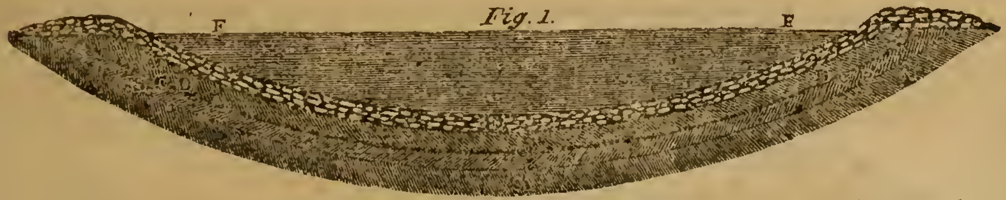
The greatest difficulty in finding water is in chalky soils, because they are not, in themselves, very retentive of it, and generally lie in such thick beds, that it is expensive to dig through them. However, it should be tried; and if sand or gravel be found underneath, water may be depended upon. Even here, ponds are easily made, by digging into the chalk, and lining them with a coat of clay, as before directed. If there is a supply of proper manure, such as clay, or marle, this situation is well adapted to grain, which loves to stand dry; and as this kind of ground produces more forward crops than clayey or strong soils, it may be sowed early with corn, which will not in that case, be so apt to be parched up as grass is, by the summer's drought. If a good soil can be made here a foot deep, it will yield plenty of various sorts of pasture, either roots or grasses, as the farmer shall judge most proper: or it may be planted with different kinds of timber-trees.

The following method of constructing ponds has been proposed in the sixth volume of the Annals of Agriculture for the Yorkshire wold land, which is a dry tract of country, in order at all times, and in all situations, to supply water sufficient for the numerous flocks of sheep, and other cattle, kept upon it, and sufficiently good in quality for domestic purposes.

" It is observed that, about twelve or fifteen years ago, a man by profession a well-sinker, first discovered the method of making these ponds; within this period the number of them has been so increased, that scarce a sheep walk, or even field, is now without one; and the use of them is creeping into the neighbouring country, in situations where water could not be otherwise had: so general and sudden an adoption is sufficient proof of their utility; before this period many sheep-walks were entirely destitute of water; it is, however, worthy of remark, that most of those sheep which have now a constant supply of water, are by many intelligent persons, thought, from that circumstance only, to be considerably improved; whether, however, this opinion is well founded, he cannot, from his own experience assert, not having had the opportunity to make the necessary observations: but it does not admit of a doubt, that in very dry weather, much fewer sheep die than formerly: this, in several instances, was fully proved during the uncommon drought of a late summer, where the loss among sheep which had not this resource, was very great, while that among others of the same kind, and in similar situations, which did not labour under that want was very trifling; perhaps not greater than would have taken place in any other space of time."

CONSTRUCTION OF PONDS.

Fig. 1.



The plan "is shewn at fig. 1, in plate XIX, in The Complete Farmer's Dictionary of Agriculture and Husbandry, in which the line A marks a circular hole dug in the ground of the size required, which upon a layer of clay B, sufficiently moistened, is to be carefully beaten and trod down into a compact and solid body of about the thickness of a foot.

" Upon this C is a layer of quick lime finely and uniformly spread over the whole, of one inch or upwards in thickness.

" D is another layer of clay of about one foot in thickness, which is to be trodden and rammed down as the former; upon this are spread stones or coarse gravel E of such thickness as may prevent the pond receiving any injury from the treading of cattle, who would otherwise break through the body of the clay and lime, and by so doing let out the water; after this, according to the section, the pond will remain five feet deep and forty five feet diameter; the size they are usually made, F being the line of the water and of the ground.

" Brick clay is by no means required for the ponds; any earth sufficiently tenacious to bear beating into a solid compact body, though not approaching to a pure clay, will answer the purpose very well.

" It is usual, where there is an opportunity, to make the pond in a little valley, or at the bottom of a declivity, or near a high road, in which situation a stream of water may he brought into it after sudden showers or thaws, the object being to get it filled as soon as possible after it is made, that the sun and winds may not crack the clay; if it is not likely to be filled soon, some straw or litter must be spread over it; but in general, after it is once filled, the rains that fall in the course of the year will keep it full, no water being lost otherwise than by evaporation and the consumption of cattle.

" A pond of this size is usually made for from £4 to £6, exclusive of the time, and expense of the carriage of the clay, when that is necessary; the first varies in price in different counties, the last will depend upon the distance.

" It is to be remembered that the whole excellence of the pond depends upon the lime; care must be taken to spread it regularly and uniformly over the surface of the lower bed of the clay; it is well known that ponds made with clay alone, however good its quality, and whatever care may be exerted in the execution, will frequently not hold water; these with the above precautions rarely fail. Never having seen a pond dug up after it had been made some time, he cannot say by what means the lime prevents the loss of water; one of these two is probably the cause; either the lime sets like terrace into a body impervious to water; or what he should rather think, the causticity of the lime prevents the worms in dry weather from penetrating through the clay in search of the water; certain, however, it is, that with lime, thus applied, ponds may be made in sand, however porous, or on rocks however open, in neither of which situations are they to be depended upon when made with clay alone."

(To be continued.)

* * *

FROM THE BERKSHIRE STAR.

July, 1821.

There is obviously no means by which the interests of Berkshire, can be so essentially advanced, as the promotion of measures tending to increase, diversify, and improve the productive powers of human industry. It is, therefore, with a view to draw the public attention to this subject, and to lead to an investigation of it, combined with the hope of enlisting the abilities and talents this county possesses in developing a system that shall give energy and action to our resources, that the writer of these articles is induced from time to time to contribute his feeble efforts, towards the advancement of this interesting subject.

Influenced by these motives, a few remarks will now be offered on the following subjects, namely:

1st. Ploughing.

2d Collecting and diffusing agricultural information.

3d. Education, (as requisite for farmers, as for professional men.)

And 4thly. The necessity of union and concert of the agricultural interest.

The various benefits arising from good tillage. cannot be too strongly inculcated; when it is imperfect, there can be no good or complete husbandry, and it cannot be perfect, but by the unison of good ploughs, and skill in the art of using them.

Since the establishment of agricultural societies, this important branch of rural economy has become a subject of considerable investigation.

In respect to the plough, very interesting improvements have been made in various parts of our country; much, however, remains to be done: and as it too frequently happens that obstacles are thrown in the way of ingenious men, by local prejudices and habits, we would suggest it as a remark, applicable in a special manner to the plough, that success and present benefit may be obtained by adopting the *general* construction of the ploughs in common use; altering the *proportions*, and giving the *operative parts*, the requisite cast. Those, also, who project improvements, whether it be in ploughs or any other implement of husbandry, will do well to bear in mind the importance, 1st, of *simplicity and strength of construction*, so as not to be liable to get out of order, and that when repairs are necessary, they may be done by any common workman. And 2dly, of *reasonable prices*; that every one can afford to purchase them.

In respect to ploughing, every effort should be made to extend a practical knowledge of the art; no plan, perhaps, can be found more effectual for that purpose, than that of establishing a competition by *ploughing matches*, with rewards to those who excel in *good workmanship*. The utility of their meetings begins to be generally admitted, in those places where they have been introduced. It is desirable they were more general, and that annual ploughing matches were established in *every coutry town*. They would not only tend to afford and to disseminate instruction, to remove prejudice, and ameliorate our breed of working cattle, but they would offer rural and rational amusement worthy of the American farmer.

Agricultural societies, although of recent date, have produced the happiest effects by the spirit of enquiry and emulation they have excited, and the knowledge they have been the means of circulating. But their efforts to be extensively useful, and fully successful, must be seconded by the zeal, liberality and good sense of the public; combined with a willingness on the part of practical agriculturists, to contribute to the general fund of useful knowledge, from the stores of their individual experience, and observation. Extensive good can only be achieved by united efforts.

With a view to attain this great *desideratum* it is proposed to institute FARMER'S CLUBS, to consist of practical farmers only, in each town in the county.

These associations would, in my opinion, combine the means, and energy necessary, to give complete success to the zealous and laudable efforts of the agricultural societies; by the facilities they would afford for inquiring into, and comparing the different practices at home, and abroad; for practical investigation of the merits of systems and inventions; and for an effectual circulation of useful information. In the course of friendly and familiar conversation, useful observations are made, new facts are stated, errors discovered, and practical knowledge derived from *experience* is elicited, which otherwise might have lain dormant, or remained confined for years to an individual, or small district.

Such institutions could not only cherish and keep alive a laudable zeal for the improvement of the great and fundamental source of national prosperity, but would in their operation have a tendency to illustrate the important truth that "*there is no science in which so great a variety of knowledge is necessary*, as in that of agriculture."

This truth once admitted, it would become *fashionable* for parents to *educate* some of their sons for, and bring them up to the profession of farmers. The existing *propensity* to inundate our country with lawyers, doctors, and shop keepers, would sensibly decrease; thus encreasing the *productive classes*, the produce of our soil and our industry would augment, as pettifogging, quackery, and the means of vending foreign manufactures would diminish.

Another, and very important effect of these institutions would be, to cause farmers to think more of themselves individually, and collectively, as well as of the importance of their profession, than they now do.

The commercial, manufacturing, and professional classes, have each their associations, and organized systems, for the collection and diffusion of useful knowledge in their several callings, as well as for the maintenance of their respective interests and rights. While the farmers, (the most valuable body in society, and in point of numbers and productiveness, greatly superior to *all* the other classes in the community,) are insulated from each other; and being without union or concert, they voluntarily deprive themselves of that collective influence which of right belongs to them.

Merchants have their chambers of commerce, *manufacturers* their committees, *professional men* their societies and bar meetings;—it is very desirable that *farmers* should, at length, "*look to their interests*," and institute clubs.

SINCLAIR.

AGRICULTURAL PRODUCTS AND PROSPECTS.

EXTRACT TO THE EDITOR.

Dear Sir, *Wheatland, July* 13, 1823.

I had the pleasure to receive your favor of the 9th current, yesterday; and thank you for this renewed instance of friendly attention to my requests.

Our Grain Harvest is now nearly completed, and we are enabled to form a more accurate estimate of the results than heretofore; and it gives me great pleasure to inform you that the general crop very far exceeds the expectations of the most sanguine calculation.—In some instances, the crop is as heavy as I have ever seen—in most I think it may be estimated at nearly an average—while in others, the yield has been only meagre, and some fields have wholly failed.—These results are pretty much produced by the standard of fertility and cultivation; but the fluctuation of our prospects during the progression of the season, was truly remarkable, and without example—at first the promise was extremely flattering; during May and the early part of June, it became very alarming, and almost hopeless—after which period resuscitation was miraculous, which is ascribable, I think, to the original strength and vigour of the root, and the occurrences of the most propitious seasons. Our fields of young clover exhibit the most splendid appearance, and the growth of volunteer clover is superior to that which we have been able to produce for some years past, by the most skillful and careful cultivation. Our corn, millet, &c. present the most satisfactory promise. and, in fine, there is a probability of the present year being far more prolific in the aggregate of agricultural products, than any which has been experienced for a long time. Having given you this general account of our crops, since you have been so kind, my dear sir, as to express a solicitude about mine in particular, I have the satisfaction to say that it is very good, indeed nearly double what I at one time expected. My wheat and rye will be between five and six thousand bushels, and the various other products of the farm promise extremely well.

Your's, my dear sir,
With sincere regard and esteem,
H. S. TURNER.

* * *

FROM THE GENIUS OF LIBERTY.

Mr. Patton—Please give the following a place in your next paper, as it is now time to use it.—I have for more than twenty years past, kept meat hanging up in my smokehouse, through the summer season and no fly, worm or bug has injured it.

To prevent such injury, about this time of year, I take clear strong ley made of wood ashes. I commonly boil it to make it stronger than it generally runs off, then I take my bacon and smoked beef, having two or three gallons of the ley in a large iron kettle, I take each piece of meat and dip it into the ley, so that it is completely wetted with it, then I let it dry—then I hang the meat in its former place. By this process I have invariably found that it kept the meat free from bugs and worms, and no taste of ley is ever perceived, not even on the outside. Yours, &c.

JOHN POTTER.

* * *

To prevent Moulding in Books, Ink, Paste and Leather.—Collectors of Books will not be sorry to learn that a few drops of Oil of Lavender will insure their libraries from this pest. A single drop of the same oil, will prevent a pint of ink from mouldiness for any length of time. Paste may be kept from mould entirely by the same addition; and leather is also effectually secured from injury by the same agency.

* * *

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at, and delivered from Nottingham Inspection Warehouse, during the quarter, commencing on the 1st day of April, in the year eighteen hundred and twenty-three, and ending on the first day of July in the year eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	148			148
Number delivered.	184			184

BADEN & BOSWELL, Inspectors.

TREASURY OFFICE, ANNAPOLIS, July 5, 1823.
True Copy, from the original report on file in this office.
B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at, and delivered from Taylor's Landing Warehouse, during the quarter, commencing from the third day of April, eighteen hundred and twenty-three, and ending on the third day of July, eighteen hundred and twenty-three.

	Domestic growth	Growth not of this state	Re-inspected.	Total.
Number inspected.	72			72
Number delivered.	110			110

DAVID STEUART, Inspector.

TREASURY OFFICE, ANNAPOLIS, July 10, 1823.
True Copy, from the original report on file in this office.
B. HARWOOD, Tr. W. S. Md.

A report of the tobacco Inspected at and delivered from Dugan's Inspection Warehouse, during the quarter, commencing on the first Monday in April, eighteen hundred and twenty-three, and ending on the first Monday in July, eighteen hundred and twenty-three.

Baltimore, July 8, 1823.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	533	7	24	564
Number delivered.	511	21		532

R. WATERS, Inspector.

TREASURY OFFICE, ANNAPOLIS, April 28, 1823.
True Copy from the original report on file in this office.
B. HARWOOD, Tr. W. S. Md.

GRAPES—ANSWER TO MR. GIBBS.

SIR, *July* 18*th*, 1823.

If your correspondent, Mr. Gibbs, will procure some coarse brown wrapping paper, and have bags made so as to admit of the growth of the bunch to its full size, and put them on when the grape is about the size of a pea, I think he will find it to answer the purpose desired.

The cause, as far as my experience goes, proceeds from dampness, either from heavy dews, or showers of rain, and the sun shining out with great heat before the moisture has had time to evaporate, the grape is scalded, which causes it to rot, and afterwards dry up. It is also necessary to keep the ground perfectly free from weeds or any vegetable production, to promote a free circulation of air, which is of great advantage. There is, also, another advantage attending the bags, they are generally taken possession of by one or more spiders, which effectually prevents the entrance of every other insect, which, without that protection, frequently destroy the finest bunches. When the fruit is gathered, the bags may be kept, as they will answer very well for another season. If Mr. G. is successful on making the above experiment, (of which I make no doubt he will) it would give great satisfaction if the result was communicated through the medium of your very useful paper, as I have always taken a great interest in the cultivation of the *grape*. *A Cultivator of the Vine.*

THE FARMER.

BALTIMORE, FRIDAY, JULY 25, 1823.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $6 75—New wheat, $1 25 to 1 27—Red do. $1 42 to $1 43—Rye, 75 cents—Corn, 50 to 52 cents—country Oats, 40 cents—Beef, 8 cts per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, round, 8 to 9 cents per lb.—Pork, $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Buckwheat, none—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons 36 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $2 75 per bbl.—No. 2, $2 50—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 14 cts. per lb.—Eggs, 16 cts. per doz.—New Hay, $14 per ton—Straw, $8.

MARYLAND TOBACCO.—One hhd. made by Elkannah Waters, sold for 14 50—no material change in prices since last notice.

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE, TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

No. IX.

To whatever extent the agency of an intriguing, or log-rolling *policy is required in the support of an object, we may rest assured, that,* all is not right, *that the object itself must be destitute of real merit, in an equal proportion.*

82. The country up the Potomac has already been stated (16) to contain 10,000 square miles. It has also been characterised (17) by the high authority of a Committee of the Senate of Maryland, as being a *country by no means celebrated for its richness and fertility.* By the same authority it is also stated (17) that *were the Potomac improved to the utmost possible extent, its trade must be considered but of minor importance, when compared with that of the Susquehanna.* But it is by no means my intention to avail myself of this evidence *for the purpose of undervaluing the Potomac or any one of its appendages.* On the contrary, I have stated (78) that I was, *not only entirely* willing but sincerely desirous for all the facilities, all the capacities of the Potomac to be duly appreciated and improved. And such I still maintain to be the fact. But at the same time, let it be recollected, that *no facilities, no capacities,* however great they may be, can, with propriety, be said to be *duly appreciated,* if rated above their merit, and that the performance of every enterprise most naturally and correctly belongs to those portions of the community who are most deeply interested in its benefits.

83. Owing to the double advantage of 30,000 square miles being accommodated with the facilities of a water conveyance, to and from market, by means of 100 miles of Canal, instead of 182 miles, nearly double the distance, being required for only 10,000 square miles, that is, for only one third of the extent of country, the trade of the Susquehanna, at once assumes an attitude of importance to Maryland, surpassing that of the Potomac, in the proportion of between 5 and 6 to one. The annual amount of profits to be divided to the stockholders, from 30,000 square miles of country, such as is described up the Susquehanna, have already been estimated at $750,000; beside an annual gratuity of 18 millions to the public. At the same rate the annual amount from a country of only 10,000 square miles, such as is described upon the Potomac, ought to be less than $250,000. Accordingly, it appears that the Potomac Commissioners, pages 38, 39, 40 of their report, have given an estimate in detail, founded on data entirely different from mine, amounting to $240,000. Hence it is presumed, no patron of the Potomac can, with propriety, object to my estimate, for two reasons: in the first place, it coincides so very nearly with the official amount as to differ from it only one twenty-fourth part of the whole, and again, that difference,.instead of being opposed to his side of the question, is directly in its favour.

84. The Commissioners' estimate of profit upon $1,578,954 their estimate of expenditure, is equivalent to 15 per cent. per annum, with an excess of $3157 yearly, to meet incidental expenses. Agreeably to my general estimate of $10,000 a mile, $250,000 on the cost of 182 miles, is nearly 13¾ per cent; but admitting the Commissioners' 15 per cent. to be the correct sum to be derived from 10,000 square miles, 45 per cent. must be a sum equally correct to be derived from 30,000, supposing contrary to the evidence, (82) that both countries were equally rich and fertile. But admitting the average cost per mile of both Canals to be equal, it is evident, that this per cent. to be in proportion to the expenditure, must yet be enlarged in the same proportion that the Susquehanna route is shorter than that of the Potomac; that is, divide the product of the 45 per cent. and the 182 miles, by the 100 miles, and the quotient which is nearly 82, is the per cent. for the Susquehanna trade, that is equivalent to 15 on that of the Potomac. This may justly be considered as proof positive that if the Commissioners' 15 per cent. in favour of the Potomac, *is not too high,* neither is my 75 per cent. in favour of the Susquehanna *too high;* but on the contrary, *too low,* by almost 7 per cent. per annum.

85. It has already been adverted to as a possible event for the Philadelphians by dint of exertion to draw off to their city, perhaps, one third, or at most one half of the Susquehanna trade. But were one third to be thus drawn off, the residue would amount to 50 per cent. per annum to the stockholders, and a gratuity of 12 millions annually to the community; or should it so happen that one half were to be taken, the remaining half would be equal to 37½ per cent. per annum on the stock, and a gratuity of 9 millions to the public; either of which fractions of the Susquehanna trade, even the least, would greatly transcend in importance to Maryland, the whole of the Potomac trade, were it offered, subject to no division whatever. Owing, however, to the proposed Potomac appropriation of $500,000, being somewhat less than the whole estimated expense, (84) and considering that there are in the District three markets to be supplied, it may, rationally be inferred that it would be deemed *very unreasonable indeed,* for Maryland to expect more than one third of the Potomac trade in return.

86. Thus, then, supposing the situation of Maryland to be equally as advantageous as that of the District, for participating in the benefits of the Potomac, the utmost expectation that could be indulged, even in that case, would be 15 per cent. annually on $500,000, that is $75,000, together with a gratuity of two millions annually to the public. The sum of these benefits, that is $2,075,000, it is true, would appear to be large, were there no opportunity for Maryland to do better with the treasures of the state; but certainly, the amount is but small when compared with a moderate expectation from the Susquehanna, to wit: $500,000 per annum, that is 50 per cent. upon one million, in addition to a gratuity of 12 millions to the public, being together equivalent to $12,500,000, that is more than six times the amount presented from the Potomac.

87. But the difference above stated, though very great, does not include the whole difference in favour of the Susquehanna. The Potomac Canal, without its proposed appendages; without a substitute Canal between Baltimore and the mouth of Monocacy, or Harper's Ferry; and the cross cut Canal between Baltimore and Bladensburgh, would be directly calculated to operate as a very great injury to Maryland, instead of a benefit. From its local situation, it would naturally intercept and turn to the District a great mass of Western trade, that by means of our turnpikes, woold otherwise find its way to the Baltimore market. Without its appendages the Potomac Canal would sweep from Maryland and transfer to the District every dollar of mercantile profit upon all the trade that by means of its facilities, should be drawn into it from off our turnpikes

88. Neither would it be possible for the advantages of the Potomac Canal, *alone,* to be very extensive to the farmers of Maryland; and from the little interest *generally* that the state can have in it, I am inclined to believe it cannot be very important for the state to aid in the enterprise. I have said (82) *it was not my intention to undervalue the Potomac, nor any one of its appendages.* Neither is it. I am aware that *South of the river,* upon the Shenandoah, the Opucon, the South Branch, and other tributary streams, there are excellent lands; but these are all known to be the property of Virginia. *North of the river* too, upon the Antictam, the Conecocheague, and Conoloway waters, the soil is very productive; but Pennsylvania, is presently its owner. Hence, it is evident, that were the trade of ten times the value that the best lands could make it, the interest of Maryland would constitute but a very small item in the business; because, from the very nature of the case, the profits of the farmer would, principally, go directly into Pennsylvania and Virginia, while those of the merchant would centre in the District of Columbia. From geographical and other authentic information, I have no doubt but there are many luxuriant districts of country in Egypt and the Land of Promise. I am not, however, prepared to believe that if the Egyptians, or the Turks, were in want of a canal, that it would be incumbent on Maryland to aid in the work.

89. In countries so foreign, those who were to receive the benefits, ought to encounter the labour. And by parity of réason, the same rule may very well apply to our situation at home. West of the South Mountain, there are only two counties in Maryland. For the *benefit of these,* and as an *object of public good,* let the state authorise the opening of the Canal by a chartered company, taking care to reserve such privileges as may be necessary; after which our own citizens, and all others, will be at liberty to subscribe as much as they please; and to accomplish the work as soon as they please. But for my part, I would suppose that as the state has already been very liberal towards the Potomac, without the least return, *worthy of notice,* it would be advisable not to be *doubly liberal* there, at a time when any aid that can be afforded, would be of the utmost importance in promoting the proposed Canal to the Susquehanna; an undertaking that if any dependance can be placed in careful and accurate calculation, appears, from thé same data, to possess more than six times the promise of its importunate rival.

90. In 1820 the population of Maryland was 407,300. The subsistance, habitation and clothing of this number, at the very low rate of $50 each, amounts to upwards of twenty millions of dollars annually. This, no doubt, is a very serious sum to be raised yearly, and there are thousands amongst us, who are under very great difficulty to accomplish their part of it. It would, at least, be worthy of strict examination, whether only $2,075,000, per annum, the utmost expectation (86) from the Potomac, would be competent to afford the required relief. Lest it should prove to be incompetent, let us turn our attention to the more ample sum of $12,500,000, annually from the Susquehanna. It is one of the doctrines of the eminent Apostle Paul, 1st Tim. 5th chap. 8th verse. *But if any provide not for his own, especially those of his own house, he hath denied the faith, and is worse than an infidel.* What more conclusive evidence then, permit me to ask, would it be possible to urge against those, to whom the choice, upon the present occasion may be confided, of *their having denied the faith,* and being *worse than infidels,* should they, regardless of every principle of common sense, and common prudence, reject the large sum above mentioned, and give the preference to the small one? Were any candidate for office

known to be capable of such an error, it would certainly be a crime to put it in his power to be the disgraceful agent of his own folly.

(To be Continued.)

AGRICULTURE.

WATER PONDS FOR THE USE OF CATTLE AND FOR OTHER PURPOSES.

(Continued from page 143.*)*

On this mode of making ponds for the use of live stock, (described in the last number of the Farmer) there are several circumstances of the process more fully detailed in the Rural Economy of Yorkshire, under the heads of, 1. the run, or collecting surface ; 2. the reservoir ; 3. the liming ; 4, the claying ; 5. the covering ; 6. the time of making ; and 7. the cost.

In regard to the 1, or the run, the author remarks that "a bare firm surface, as a road, collects the greatest quantity of water." But that "a grassy surface retains the rain water which falls upon it, and which, in level situations, is conducted into the soil, by worm-holes and other inlets, with which grass land generally abound ; especially in summer, when a collection is of the greatest value. However, if the subsoil be retentive, ditches, especially of arable inclosures, will frequently afford a supply, even in summer ; but in an upland situation, where the subsoil is generally absorbent, a road, or an artificial run, becomes necessary. But that in upland districts, as the wolds of Yorkshire, and the downs of Surrey and Kent, the surface is generally broken into hill and dale, and diversified by smaller vallies and inequalities. In situations of this kind, he says, artificial runs are most wanted, and may be most easily made. He has seen some faint attempts at making them on the wolds of this district by cutting a few grips, with a spade, above the reservoir ; but they were too few, too short, and too seldom scoured, to answer, in any considerable degree, the intended purpose. They nevertheless, he observes, shewed plainly enough, the utility of channels for catching hasty showers, falling on grassy slopes, off which a considerable quantity of water will escape, provided there be channels at proper distances, to receive it." But in order to reap the greatest benefit from an artificial run, and to make it with the greatest ease,—he advises to "form the basin at some considerable distance from the head of a valley ; from which, down to the reservoir, to open a main channel by two furrows of a plough turned outward. From this main stem to plough lateral branches, with an easy descent towards it, along the sides of the slopes, by single furrows, turned down hill ; by which means the ploughing will be rendered easy, the channels made free on the upper sides for the admission of water, and high on the lower sides for retaining it." And he thinks "the plough would not be less expeditious in scouring than in making the channels : or perhaps a more sledge-like implement would be still more effectual than the plough, in closing the fissures and worm-holes, which presently are formed in watercourses laid dry : and which, if left open, absorb an inconceivable quantity of water before they be saturated ; especially if the current of water be retarded, by grass or other obstructions that may be formed in them."

In respect to the 2d, or the reservoir, he says, "the situation in them should depend principally on the run. Near the side of a road is, in general, he supposes the most desirable situation, provided a sufficient descent can be had from the road to the reservoir. Roads leading along the sides of slopes can only afford a supply to the grounds on their lower sides. But in this country when a road leads down the descent, it is generally, he says, furnished on both sides with ponds, some of them, perhaps, not having more than an hundred yards of run, off a narrow roadway ; yet, from that small quantity of surface, are sufficiently supplied with water." He adds, that, "in the situation of a pond, there is one thing requisite, which does not seem to be attended to, even by the most skilful in the art. The requisite he speaks of is that of admitting a waste water place, on the upper side of the reservoir, to prevent the water, when the pond is full, from running through it, by which means it becomes filled up unnecessarily. For the nature of foul water is such, that whenever it changes from a current to a stagnant state, it deposites a considerable part of its foulness ; so that the water which leaves a full reservoir, is finer than that which enters it, the sediment, of course, being left behind in the reservoir. Whereas, if the current into the pond were to cease when the pond is sufficiently filled, the sediment of the overplus water would, he imagines, be got rid of. The pond would receive, in this case, no other foulness than that which was given by the quantity of water requisite to fill it. He thinks that a small catch pool, between the run and the reservoir, would arrest much of the foulness of water collected from a road : and, in a situation which could admit of it, would be worth the trouble of forming. In many situations, the mud it might collect, would, he supposes, amply repay the expense of forming it."

He states that "the form of the reservoir is, universally, that of a shallow bason, or more strictly speaking, that of a flat cone inverted ; the sides shelving straight from the brim to an angle or point in the centre. If the excavation be made sixty feet diameter, its greatest depth is about seven feet : if forty feet diameter, the depth is about five,—before the coats of clay, &c. be laid on." And that, "a reservoir set out twenty-two yards diameter, by seven feet deep, will, when finished, measure about sixty feet by six, and will hold about two hundred and ten cubical yards, or near seven hundred hogsheads of water. Forty feet diameter by four feet deep, when finished, contains sixty-two cubical yards, or two hundred hogsheads (of sixty-three gallons, wine measure)."

In undertaking the work, "the first business in setting out a reservoir, is to take the level of the site, and drive piles, as a guide in forming the banks, and in making the conducting channel and waste water place. If the situation be on a slope, the excavated mould is, he says, used in forming the bank on the lower side : if nearly level, the mould requires to be removed, or, (if laid round the edge) the conducting channel to be raised. But if the clay or stone be excavated, it is laid separately aside to save carriage. And, if the lower side be raised with the excavated materials, they ought to be firmly worked together, or should lie a sufficient time to settle ; otherwise, he says, the side thus formed, is liable to settle after the reservoir is finished ; by which means cracks are formed and a miscarriage ensues. When the excavation has received the intended form, its sides are made firm and smooth, for the reception of the lime, or first coat."

With regard to the 3d. or liming, its use is, he says, "merely that of preventing earth-worms from perforating the coat of clay ; the proper quantity depends, in some measure, on the nature of the soil. A fat rich earth, among which worms always abound, requires more, he says, than a dead hungry mould, or a dry stony bottom ; on which retentive pools are said to have been made, without lime. However, as no soil, perhaps, is entirely free from those enemies to ponds it would be folly to risk a miscarriage in any situation ; as the expense of liming makes but a small portion of the whole expense ; and the only preparation of the lime is that of slaking it and picking out the cores ; no sifting or skreening being, in general used ; though obviously useful where it is usually laid on with a spade or shovel ; but a sieve would, perhaps, be found by the inexperienced, a better tool ; and the extra labor no object." And, "the thickness of the coat laid on is, he adds, about half an inch. Half a chaldron of lime is sufficient to complete a pond of forty feet diameter. The principal part of it is laid on beneath the clay ; a few bushels only being reserved for scattering round the edges, to prevent the worms from getting into the clay." He here states that, "a still more secure, and on the whole, a more eligible method of liming has lately been thought of, and is now [June 1787) in practice, at Lockton, (in that neighbourhood) by the commissioners of inclosure, in making public drinking pools, for the use of the township. Instead of scattering the lime in powder, it is formed with sand, into mortar ; a regular coat of which is spread about an inch thick, not only beneath, and at the edges of the clay, but over the entire surface. This is, he thinks, an obvious improvement, which appears, to human foresight, to bring this method of forming pools near to perfection. The clay becomes cased on either side, with a regular coat of cement, and is thereby secured, in perhaps the completest manner possible, from the attack of worms. The labor and expense, however, is by this method increased. A pond, nineteen feet diameter, he says took two chaldrons and a half of lime, and five small cart loads of sand. Both the materials were sifted, and worked up in the usual way, into mortar. Great caution is necessary in laying on the clay, in this case. And, he adds that, "if the mortar does not lie some time to stiffen, the clay displaces it ; if it get too dry before it be covered, it is liable to crack."

In respect to the 4th, or claying, it is, he says, in this operation, the manual art, and the labour, principally centre. And that, upon the wolds, clay is sometimes fetched six or seven miles ; and is seldom found at hand, in situations where artificial pools are most wanted : the carriage of the clay, therefore, generally becomes a heavy article of expense. But, "the choice of clays, he observes, thought to be less essential, than the working of it. Good ponds are said, he adds, to have been made with common loamy mould ; but it is wrong, he thinks, to depend on any thing, but a strong ductile clay, if it can be had within a moderate distance. And, "the thickness of the coat, now pretty generally laid on is, he says, about five or six inches, in the rough ; beating it down to about three inches. In the infancy of the art, two coats of clay, of about that thickness, were laid on ; but one coat has been found effectual, and much less expensive. However, it is probable, it will not prove so durable." But, "the method of beating will, he says, be difficult to describe ; yet it most especially requires description." And, "the drier the clay is worked, the less liable it will be to crack with drought, when finished. In a dry season, however, it is necessary to moisten it : for which purpose the centre of the pit is sometimes finished first, to collect the water of showers : the carriage of water being, in some cases expensive." In executing the work of laying on the clay, "the workmen, he says, begin at the bottom of the pit, and work upward ; laying patch after patch, or circle after circle, until the brim be reached ; taking great care not to carry on sticks, straws, dirt, or any kind of foulness, among the clay or with their feet ; and being careful not to displace the lime, in throwing it on ; to prevent which, the lime is not spread over the whole at once ; but is scattered on, as it is wanted to be covered with clay." And as soon as "a plot of clay is laid on, and adjusted, it is beaten flat, with a wooden 'mell,' or beetle, made, at present, of these dimensions, the head fourteen inches long, and three inches diameter; the handle four feet long, and suited in thickness, to the hand of the workman. Beetles of different sizes have been in use, in different stages of the art; but none of them have been found to be so well adapted to the operation, as that in use at present. The first operation is performed with the side of the beetle, to level the protuberances, and smooth the roughnesses, so as to make the whole into a regular sheet of an even thickness." And when "this is effected, it is struck forcibly, with the end of the beetle, which is driven down nearly, but not quite to the lime; leaving the surface full of some what honey-comb-like cells or dints. If the beetle be struck unguardedly, quite through to the lime, a piece of clay, and a little lime, if required, is carefully placed in the breach, to prevent a defect in the part thus injured." And, "the whole being gone over in this manner, with the end, the surface is again levelled down with the side of the tool; the workman passing backward," as the business proceeds.

In regard to "the next beating, it is with the end, but not quite so deep as before; and the roughnesses being again levelled with the side, it is again worked over with the end; but still shallower than in the middle beating." He observes that, "the first strokes with the end of the beetle ought to close the bottom of the clay firmly, with the lime and the bed on which it is spread;—the second ought to unite the middle of the clay with the bottom;—and the last to close, without a pore, the upper part with the middle; —and the last strokes, with the side of the beetle, ought to be sufficiently forcible to close, entirely, the dimples formed by the last given strokes with the end." When "these several operations are thought insufficient, it is continued to be worked with the end and side of the beetle, alternately, until not a flaw can be found; the entire coat of clay being manufactured into a lead-like sheet, firm enough to bear a man without an impression, and a horse without injury; and, when two coats of clay were in use, the upper one was, he says, laid upon the rough surface of the last end-beating; by which means, the two coats became, by the subsequent beatings, incorporated in one thick sheet. A substantial method, this, of which, he says, the present appears to be rather a refinement, than an improvement" of the practice.

In the 5th operation, or covering, he remarks that "the first coat is of common earth, to assist in keeping out the drought, and to make a bed for the stones; to prevent their asperities from piercing, and thereby injuring the sheet of clay. This coat may be three or four inches thick, according to the nature of the stones with which it is to be covered. If these be large and irregular, more earth is requisite, than when the stones are small, smooth, or flat. The leanest, most infertile soil is fittest for this purpose. Worms and weeds are equally to be feared; and a rich soil is genial to both. In this point of view, two coats of clay are, in his opinion, much preferable to a coat of clay and a coat of rich mould." He thinks that the persons employed in this sort of business, are not "sufficiently aware of the mischievousness of weeds: indeed, some ponds will remain, for several years, in a manner free from them. But he has seen others, in which weeds, even docks (near the edge) have grown luxuriantly. It is probable that the tap-rooted weeds strike through the several coats; and, whenever the roots decay, a perforation must be left." And he supposes that "mould taken from a dry sound highland situation is, in all human probability, less liable to propagate aquatic weeds, than the earth of a low situation or a bog." He thinks the following an ingenious and simple method of keeping the weeds under; especially at the edges, where they are generally most abundant. Though all the sides of a drinking pool be open, cattle will go to particular places to drink; and in these places, the weeds are trampled upon and killed. Therefore, to check the rankest, the parts which are most free are covered with thorns, while those which are weedy are left open for the cattle to drink at."

He adds that "the mould being rendered level and smooth, the stones are laid on; first covering the mould with the largest, laid with a flat side downward, to prevent their sinking down to the clay; and upon these laying smaller, until the coat be made five or six inches thick." He also states that "straw has been used between the clay and the stones; and, that in the instance in which an improved method of liming was practised, a layer of thick sods was laid, grass-side downward, upon the lime; and, upon the sods about six inches thick of loose stones," so as to form a secure coat.

(To be continued.)

FROM THE SOUTHERN PATRIOT.

INLAND SWAMPS.

Mr. Editor—Agreeably to the intimation given in my last number,* I now beg leave to introduce a part of the report, of the engineer who examined the swamp that leads into the south-west branch of Stono River, or Wallace's creek: Report—"According to my instructions, I have examined the situation of the Swamp from the high bridge on the Stono new road to the mouth of the public drain near Rutledge's landing. The present drain, by following the natural course of the water, has in my opinion, been judiciously laid out, and ought not to be altered except so far as to cut off a few sharp angles that the water may pass off more freely—from the New Road to Laurel Hill, the swamp rises gradually as you approach the creek in consequence of the alluvial deposits, which have been formed there for centuries. The only outlet to this extensive swamp, including its different branches, is ten feet wide and two feet deep. How is it possible that such an immense body of water should find a passage through so small on outlet." The report then goes on to make such remarks as are not necessary to be repeated here, as they are merely local. I shall make no comment on the report, but will repeat the observations of the Engineer; how is it possible that such a body of water can be carried off by so small an outlet? Permit me now, to introduce the remarks of the Editor of the American Farmer, "when the swamps of this county (Prince George, Virginia,) are said to be scarcely worth bringing into cultivation, the assertion is intended to apply to the only course, which can now be adopted for draining them; that is, by the unconnected efforts of different individuals, who are compelled always to begin at the wrong end; on the outskirts and head branches instead of at the outlet, and through the middle of the swamp. Therefore all attempts have been attended with great labor and expense, and have never had more than partial success. But draining on a rational plan, the improvement would be one of the most valuable, and decidedly the cheapest that could take place in lower Virginia" The very error of which this writer complains, is the fatal error, that has been committed on all the swamps that I am acquainted with; and has been the cause of immense capitals being sunk and destroyed. If this would be so important an improvement to Virginia, how much more so to South Carolina, where we have a grain so well adapted to low lands. The resources of the state would be materially increased, and so fully were our ancestors convinced of this truth, that ample powers were vested in the Commissioners—all the powers of Commissioners of Roads. In introducing these remarks before the public, some apology may be deemed necessary, and if the subject were altogether of a private nature, I should most willingly do so; but as I consider the state as being intimately concerned in the prosperity of all its citizens, any improvement which may take place in a part is interesting to the whole. Candor bids me state, that my chief object is to call the attention of those who have capital at their disposal, and to ask whether it is not an object worthy of attention, as a speculation, to purchase up these neglected lands, or assist the present proprietors who are too poor to commence the undertaking: and by a rational plan of improvement not only increase their own fortunes, but deserve the thanks of their country. The citizens of Charleston are interested in these improvements, for they will not only swell the amount of exports, but furnish at a cheaper rate than at present, those articles in the farming line, which contribute so much to our comfort, and which are at present so extravagant, as to force those who have small incomes to leave the city. When I look through the vista of time, and contemplate the rising glory and happiness of my country, my imagination swells with the brightest visions, but *medio de fonte leporum surgit amari aliquid quod in ipsis floribus angat;* I no sooner turn and behold the monuments of decay which surround me, than my heart almost sinks in despondency and despair.—Should I, however, by calling the attention of the public to this subject, become the humble instrument of producing a better state of things; happy, aye thrice happy shall I be. Be the result as it may, I shall have the consolation to think, that I have made an effort. I now, Mr. Editor, take my leave, and thank you for your kindness in giving publicity to these crude but well intended remarks.

PHILO RUSTICUS.

FLAX AND HEMP.

☞ We have in this number commenced the publication of a pamphlet published in Ireland, by the Dublin Linen Board, the last fall, and which we believe to contain very valuable information upon the subjects of flax and hemp. The important facts stated therein, with respect to the mode of managing flax in Holland, are, we think, calculated to benefit Ireland to the manifest loss of the United States. For, if the fibre is better when made from the matured plant, and they should adopt the principle, what is to prevent the Irish from growing their own seed? We cannot but consider it as very strange indeed, that the Linen Board should have remained so long ignorant of the important fact, that the flax is better from the seeded plant, than it is when pulled green. It will be perceived that Mr. Besnard attaches the utmost importance to the *rotting of the plant*, and therein we are inclined to think he is right. We believe it to be all essential. The importance of the subject, and the new light which is here thrown upon it by a person specially selected by the Board of Linen Trade in Ireland—and who may, therefore, be presamed to be peculiarly qualified to make the investigations—will be a sufficient apology for giving to this little pamphlet so large a portion of the Farmer. We are not well informed as to the extent of the culture of flax and hemp in this country, but our impression is, that in Ohio, Kentucky, and other western states, they are objects of increasing importance, and that they must grow in consequence, as with the augmentation of capital, factories shall be multiplied in the West Indeed, when we reflect on the eminent advantages enjoyed in the Western country, we are surprised that the raw material which is produced there, is not to a greater extent manufactured on the spot. Water power, fuel, the raw material, &c. &c. &c. being there eminently *proximated.—Edit. Am. Far.*

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* See Am. Far. No 14, vol 5.

Report of an inquiry into the mode of cultivating and treating Flax, in the Netherlands, &c. by Peter Besnard, Esq. Inspector-General for Leinster, Munster, and Connaught.

INSTRUCTIONS TO INSPECTOR-GENERAL.

No. I.

Letter of the Trustees of the Linen Board, to James Corry, Esq.

"London, June 21st, 1822.

"Sir,

"Aware that the law will not justify a regular meeting of the Linen Board of Ireland, but in Dublin, we, the undersigned members of that Board, viewing the great and growing importance of the culture and proper management of flax and hemp within Ireland, and conscious of the superiority of that which is sent to these countries from Holland and the Netherlands, request that you will immediately direct the Inspector-General of Leinster, Munster and Connaught, Mr. Besnard, to proceed thither, as soon as dismissed from his attendance on the Committee of the House of Commons now sitting on the Linen Laws. You will hand to him such letters as shall he furnished to you by the House of Mr. Maberly, and in your instructions will direct him carefully and diligently to examine into, and report, his observations upon the mode of treatment both of flax and hemp, as well in the tillage and preparation of the soil, as in the after management and regulations of the market, until bought for exportation. We consider all these objects attainable in a tour not to exceed three weeks in duration, and that it should be performed at an expense not exceeding one hundred pounds to the Board.

"Confident that this act will be hereafter sanctioned by the Board, and feeling that the season of the year will not admit one week's delay, we affix our signatures as your authority for so acting.

Downshire,
Caledon,
Clonbrock,
Enniskillen,
Forbes,
Gosford,
M. Forde,
Thos. Verner,
N. C. Colthurst,
Ormonde,
Farnham,
Jas. Cuff,
Edm. Alex. M'Naughten,
Wm. Bagwell,
Jas. Daly,
T. H. Skeffington,
Conyngham,
Belmore,
Donegall,
Longford,
Glengall,
Hawarden,
Nath. Sneyd."

To James Corry, Esq.
Secretary to the Linen Board. *(Copy.)*

No. II.

Letter of James Corry, Esq. to Peter Besnard, Esq.

"London, Blake's-Hotel, Jermyn-st.
June 24th, 1822.

"Sir,

"In obedience to the commands of several members of the Linen Board of Ireland, communicated to me by their letter of the 21st inst. a copy of which I inclose you, I have to desire, in their name, that you do forthwith proceed to Holland and the Netherlands, for the purpose therein stated.

"You will be able to collect, from a perusal of this document, that the Linen Board is anxious to ascertain, through your inquiries, the probable reasons why those countries are able to produce a flax of a softer and more silky quality, applicable therefore to finer fabricks than the flax of Ireland is usually adapted to, and what the regulations are in those countries for dividing their flax into different sorts, or numbers, according to its fineness or coarseness, whereby it comes to the British market in a condition suited to every description of buyer.

"To attain these objects, you will commence your duty by inquiring into the nature of the soils which are considered in those countries to be best suited to the growth of flax, their manner of preparing the ground, and their time of sowing; whether the seed they use be the growth of their own, or any other country, and their time of pulling; with a full detail of all the after-management of steeping, drying, breaking, beetling, scutching, and hackling; a detail also of the mode observed in sorting and dividing it for market, with respect to quality, as well as the quantity contained in each parcel or bundle, with the market prices of each, and the fabricks to which they are suited. It would also be very desirable to ascertain whether the regulations observed in bringing it to market are directed and enforced by any legislative or municipal authority, or from whence they may otherwise derive their force; and obtain, if it be practicable, a copy of any such regulations. You will of course make the same inquiries in respect to hemp. Mr. Maberly, a member of the Linen Trade Committee, to whose useful suggestions much is due on this subject, has kindly offered me to give you letters to agents of his own in Holland, who will be able to assist you in effecting the wishes of the Board. I have written to Edward Stewart, Esq. the British Agent of the Board in London, requesting him to render you every assistance in his power; and Viscount Forbes, a member of the Board, and of the Committee, has kindly written a letter of introduction, to be presented by you to Sir James Gambier, His Majesty's Consul at the Hague, which I inclose. You must obviously see, however, the necessity of avoiding every appearance of being sent to that country in a public capacity, or of exciting by too much anxiety in your research, any suspicions that might be likely to frustrate the objects of your mission.

"As your Report will be, of course, required for public purposes, you will please to bestow every necessary care in preparing it.

I have the honour to be, sir.
Your most humble servant,
JAMES CORRY."

To Peter Besnard, Esq. *(Copy.)*

REPORT.

My Lords, and Gentlemen,

In compliance with your commands, conveyed to me in London on the 24th June last, by Mr. Corry, I proceeded on the 5th of July following, being the day after I was dismissed from my attendance on the committee of the Honorable House of Commons, for Holland, and arrived at Helvoetsluys on Tuesday, the 9th, and have now the honour to present to you the result of my inquiries on the several subjects contained in my Letter of Instructions from your honorable board. Having been informed, previous to my departure from London, that it would be impossible to acquire in *detail* from the flax growers in Holland and Flanders, the necessary information required, without the presence of some person well versed in the Dutch and Flemish Language, none of those people (as I experienced,) being able to speak either French or English, I felt it my duty to engage in London, a respectable person to accompany me, Mr. James Quantrille, whom I found not only conversant with both Languages, but well acquainted with the manners and customs of the people, and whose services I found particularly useful in this respect, as likewise as a companion in my visits to *remote places*, often amongst *persons* of various *classes* in society, with whom it was actually necessary to hold frequent communication. I further beg leave to observe, that however anxious I felt to execute the trust reposed in me by your honorable board, within the time (three weeks) in which you were pleased to express your expectation that I could perform my mission, I found it quite impossible within that period to obtain the information set forth in my instructions; first, because on my arrival in Holland the general flax crops of that country had not been pulled; secondly, because the *distance* I had to travel to obtain information, could not be accomplished in a less time than was appropriated for that purpose; and lastly, because the great flax crops of Zealand and Holland were not prepared for the process of rippling and steeping until after my return from my tour in Flanders, France, &c.; considering those operations of the first moment, I conceived I should badly have executed my duty, had I not remained to examine in detail, at my full leisure, every matter relative to the after treatment of flax, which I had an opportunity of doing during the last week of my stay in the Netherlands, from the rippling of the seed, until the article was fully prepared for market. I therefore hope that your honorable board will feel satisfied, that my *stay* was *only* occasioned by an *anxious desire* to procure the most perfect *information* in *my power*, relative to my mission.

Being desirous, on my arrival at Helvoetsluys on the 9th of July, to proceed, I set out forthwith for Rotterdam by land, and, on the journey, observed in various places flax cultivated to the amount of several hundred acres, the entire of which was standing, except one field, which was pulled, and the flax placed up to dry. On my arrival in Rotterdam I sent a message to the gentleman for whom I had letters, who instantly attended me, having been previously informed of my proposed visit. On the 10th, this gentleman introduced me to some extensive and respectable merchants and dealers in flax and seed, in whose stores I examined large quantities of flax, the growth of Holland and Zealand, all of which was made up in so regular a form, according to the various qualities, that a buyer might make a selection of any kind without fear of disappointment; this is a most important and necessary arrangement, and greatly facilitates the sale of flax in Holland. Same day I proceeded to Schiedam, about five miles from Rotterdam, and inspected two large fields of flax which had been some days pulled and set up to dry; on examination of this flax I found that the seed had been fully formed before it was pulled, and I understood that it was to remain to dry until the bole or shell would part freely from the plant in process of rippling.

Thursday 11th, proceeded to the Hague, and presented my letter of introduction from Lord Forbes to Sir James Gambier, His Majesty's Consul General in the Netherlands. Sir James Gambier offered me every service in his power, but finding that his connexions were unacquainted with the objects I had in view, and being anxious to proceed on my mission with the least possible delay, I left the Hague the same evening for Leyden, where there is a linen thread manufacture, as also a manufacture of shawls from fine wool. In Leyden I particularly examined the flax used for thread, and the wheel on which it was spun, which, having found to differ in the spindle, and other parts of what is called the tackling, I considered it my duty to purchase one set of tackling, which can be attached with ease to a common wheel, and will sufficiently illustrate, whether it be an improvement or not. On the wheels which I examined, combed wool for the shawl manufacture is spun to a great extent, and it appears to me, that wool for the finest tabinets, manufactured in Ireland might be advantageously spun on wheels of this description.

From Leyden, proceeded on Saturday to Amsterdam; on this line very little flax is cultivated, but in the immediate neighbourhood of Amsterdam the oil business is carried on to a very great extent, upwards of two hundred mills being constantly employed chiefly in Zaandam, a very large village on the opposite side of the river, and it is the Amsterdam merchants that regulate the prices of the several kinds of this valuable article, throughout the entire of Holland.

From Amsterdam, proceeded in the Night boat to Rotterdam, and attended the flax market of that city on Monday morning, the 15th, accompanied by some friends, by whose means I obtained a copy of the original regulations of the flax market of Rotterdam, which I have the honor to annex to this report. The vlas market, or flax market, is situated on a small square, to which it gives name; two buildings, covered over, and supported by pillars, stand parallel to each other, under which the vlas boeren, or flax farmers, stand with their samples before them, placed on the ground in clean linen bags; each sample contains one stone of 6¼ lbs. and has affixed to it a ticket descriptive of the number of stones of that quality the boer has ready for sale; when the purchase is made, the buyer writes the terms in his memorandum book, and the sample is conveyed to his office, where it remains until the parcel is delivered; should any difference occur as to quality, reference is made to the market master, who, with two dealers in flax, decides between the parties. The master of the market is always in attendance during the time of sale, and sees the regulations enforced, and the greatest order prevails during the market occurs. The same regularity which exists in the flax market also takes place in the sale of seed, which is likewise sold by sample, and is brought in bags containing about a quarter [illegible].

Tuesday 16th, proceeded from Rotterdam on a tour through Holland, Brabant, Flanders, &c. accompanied by Mr. —— and Mr. Quantrille, my interpreter. On my route this day to Dordrecht, passed through the village of Rysoort and Swyndrecht, in the immediate neighbourhood of which, large quantities of flax are grown, and many flax boers reside, who cultivate it in very considerable quantities in Zealand, whence they bring it in vessels, after it is pulled and sufficiently dry to ripple the seed. Those persons having large barns, and every accommodation for cleaning and storing flax in every stage of preparation, carry on a very considerable trade in this article. On my arrival in Dordrecht, viewed the flax-seed market, which is conducted with great order and regularity, and all sold by sample. In this town there are two sworn brokers, who examine every description of seed and corn, and when any dispute arises between buyer and seller, as to quality, it is usually settled by those persons: but should the seller appeal to the tribunal of the town, the brokers are then publickly examined as to their opinion; such an occurrence, as this, however, seldom takes place in any part of Holland, the farmers knowing the value of bringing their articles to market honestly, seldom vary from the quality of the sample.

Wednesday 17th, proceeded from Dordrecht, through Breda and Antwerp, to St. Nicolas, in Flanders. On this line flax is also cultivated in large quantities; that nearest to Holland I found the shortest and worst in quality, in consequence of the great and continued drought; but as I entered further into Flanders the crops greatly improved, and in many parts of that country, and Brabant, I found it growing in great abundance, and of excellent quality.

Thursday, inspected the flax market of St. Nicolas, which is held on that day of the week throughout the year, commencing at eight o'clock in the morning. In this market, flax is not sold by sample, because it is grown in small portions, and the quantity offered for sale by different individuals, is what they grow in the season, which varies from four to twenty stone, of 6¼ lbs. to the stone, and seldom exceeds the latter quantity. The flax in this market is thought to be better cleaned than the Dutch, and is said to yield ten per cent. more; the aggregate amount sold is considerable, and may be computed at about two thousand tons annually. Some of this flax is purchased for English and Scotch mill-spinners, and shipped at Antwerp, and some is sent to the South of France. The seed of this district is mostly sold for crushing, as the growers are poor compared with those in Holland, and obliged to sell it as early as possible.

From St. Nicolas, proceeded to Lokeran, where a seed, flax, and linen market is held every Friday throughout the year; in this market flax is also bought for Scotch and English houses, and the South of France; it is considered of a better quality, and commands a higher price than the Dutch flax; it is also purchased by different dealers residing in the town, the principal one of whom, *Mr. ——, I was introduced to, and from whom I received all the information I could wish. Mr. —— has dressed at his establishment about 200 tons of flax annually, the fine of which is made up in pounds, and packed in small boxes, and sent to Italy and Switzerland, in which countries it is spun for the finest lace manufacture, and sent, when in yarn, to France and Flanders, to be bleached and manufactured. Mr. —— gets all his flax dressed by women, who take it to their own houses, and usually receive twenty-four pounds at a time, which they return made up in pounds, each pound subdivided into small parts, each sufficient to be placed on the Rockstaff at a time. The process of flax-dressing is performed here, and in France, on a hackle, somewhat different from ours; it is nearly square, and the teeth not more than two inches and a half long, and, although the work is well performed on it, it is not considered by some English flax-dressers, as equal to an English hackle. Of Mr. —— I particularly inquired, if all the flax purchased by him *gave seed*, which he informed me *it did* even if *intended* for the *finest purposes*. Anxious that the honorable board should have an opportunity of seeing flax that had given seed, and which was prepared for the finest works, I purchased from Mr. —— a sufficient quantity of the article for their inspection The market of Lokeran is on the same plan as that of St. Nicolas, as to the usual quantity offered for sale; but the article is considered to be rather of a better quality. In the vicinity of this town there are seventy small bleach greens, and fifteen linseed oil-mills; the small farmers have, therefore, at all times, an opportunity of disposing of their seed, which they are in the habit of doing, as soon as it is ready for market. With respect to the bleaching establishments in this neighbourhood, they are on the old plan, without machinery, every article being washed by the hands and feet, and every description of linen bucked, and not boiled; they are watered twice a day on the grass, and, towards the finish, are rubbed over while on the grass, with a solution of a soft soap and ley, which is applied with mops, made of hair, such as is used in painter's brushes, but, in point of size, are similar to carpet brushes. This operation is performed by two men, who walk one on each side of the piece, gently rubbing in the solution. The last preparation, previous to the finish, is a steep in sour milk.

Proceeded from Lokeran to Ghent, were one of the largest linen markets in Flanders is held every Friday; but not being able to reach it in time for the market, I was obliged to defer my inspection of it until my return through that city. In Ghent, considerable quantities of yarn is spun (for the lace manufacture,) and bleached near Antwerp.

Proceeded from Ghent to Aalst; on the road, saw extensive crops of flax, and stopped at a flax farmers, who has a small hand machine for scutching, made by himself, and which he lets out to different persons in the country. This machine is similar to the Irish vertical mill, but on a small scale, and performs its work exceedingly well. Two women, one to turn and the other to scutch, attended by a girl, clean perfectly 56 lbs. of flax per day, if previously broken. In this neighbourhood there is a set of bruising machines, attached to a wind-mill, where the largest farmers bruise their flax, but the small ones break it by hand-blocks, &c.—In every case, however, the *breaking of the flax* in Flanders is *easily performed*, it is so well *prepared in steeping*.

Same day arrived at Aalst, a seed, flax, and linen market, and waited on Mr. ——, a flax dealer, to whom I had an introduction, and from whom I received the most useful information. At present he buys flax for English merchants, and other persons, and attends the several markets in his neighbourhood. While in Aalst, viewed a bleach-green, which is conducted on the same plan as those at Lokeran.

From Aalst proceeded to Brussels, where a small flax and linen market is held; in this town I examined several pieces of linen, bleached and unbleached; the former are very rudely made up, and great quantities of the latter are very coarse, and are dyed blue, for the use of the peasants of that country and Flanders, who uniformly wear blue frocks, or jackets and trowsers: those for working days are a deep blue, of coarse linen, but those for Sundays and holydays are of finer linen, and a brighter, or sky blue, and make a very neat, pretty, and desirable dress; the latter are often used by many of the better classes in the country, when travelling or attending country business.

Proceeded from Brussels to Tournay, by Halle Enghien, Ath, and Leuse, in all of which towns the linen manufacture is carried on. On the whole line from Brussels to Tournay excellent flax is grown in considerable quantities; the greatest part of it was pulled, and set up to dry, in a manner differing from the practice in Holland. In this country, and in France, flax, when put to dry, is not tied in bundles, but is placed loose, in a sloping direction, in long rows, or ridges, the heads or boles to meet, and the root ends spread out so as to form a V reversed. At each end of the double rows of flax, and at certain intervals, stakes are driven into the ground to support them. This mode is decidedly preferable to bundles, because every part of the plant is equally presented to the influence of the air; but it should be observed, that it is suitable to a country where mild, calm weather prevails in the flax season. In the immediate vicinity of Tournay, extensive crops of flax are grown, and many persons are engaged in spinning coarse linen yarns for the celebrated carpet manufactory of Messrs. Lefevre, the whole of which establishment they were so kind as to conduct me through, and where I saw large quantities of *linen yarn* dyed as perfectly as worsted. In this manufactory 4,000 persons are at present engaged, 1,400 within the buildings, which I went through, and the remainder at their own houses. All the carpets sold in Brussels, and bearing the name of that city, are here made, there being no manufacture of them in that place. Considerable quantities of linen are also made in this district, but chiefly for home consumption.

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* *This person received a silver medal from the Agricultural Society of Ghent for producing the cleanest and best flax in Flanders.*

From Tournay proceeded to Valenciennes, through the village of St. Amand, in which the spinning of linen yarn and manufacture of cordage, from native hemp, is extensively carried on, and great quantities of hemp and seed are sent by water to Antwerp for shipment. In this village I saw some remarkably fine flax, of this year's growth, that had given seed; and on the road from there to Valenciennes, very fine crops of hemp were to be seen in every direction. On this line, for the first time, I met with the Œillet plant, which all the way to Cambray I saw very generally cultivated, and which, as I understood, forms a considerable branch of trade.—The Œillet is a species of the poppy, is sown in April, and pulled in July and August, and appeared to me to be a plant that could be advantageously cultivated in the South of Ireland. The seed is shaken from it in the field, in large baskets, with sheets under them, and thence conveyed to the stores. From this seed is obtained a very superior description of oil, the first run of which is sent to Marseilles, and there mixed with olive oil, for sallads, &c. and sent to Paris and other markets. The next run is used by painters, having the qualities of very quickly drying, and not discolouring the finest shades of paint, which linseed oil often does, by drying with a yellow tint: the second is also used in making a very particular kind of soft soap for bleachers, and is found to clear and give a softness to linen, not to be obtained from common soap; it is in general use amongst all the bleachers of Cambray, for bleaching cambrics, linens, muslins, and every other description of fine goods, and produces a lather, or froth, as white as snow; without this soap or composition, a bleacher in Cambray told me he could not give his goods the softness and mellowness which they possess. The oil cake from the seed of this plant is also given to the cattle.—In Cambray I made inquiries relative to the article of cambric peculiar to that town, or, as it is there called, Batiste, from the name of the man who first introduced it, which it is said he was induced to do. in consequence of the extreme softness of the water in the neighbourhood. Here I was so fortunate as to see every process of this manufacture, from the preparation of the flax at the hackle, to its finish for the consumer; and I was assured by many persons conversant with the business, that except for some very superior kinds of cambric, on a very limited and inconsiderable scale, all flax used in that manufacture gives seed, for it is in the after management of the flax-plant, the people of Cambray say, that every thing depends to render it fit for fine works. So tenacious is the government of France of this seed, as well as of flax, that the export of both is prohibited. The process of steeping and cleaning flax in this part of France, and in Flanders, from whence they get some supplies, differs little from the plan followed in Holland, every thing being done by hand; but the greatest care is observed in every stage of preparation for the hackle. The process of hackling in Cambray is performed, as in Flanders, by women, and with utensils of a similar description; and from every inquiry I was enabled to make, I could not find any inferiority in the quality of the flax thus prepared for the foot-wheel, or what is of equal importance, in the *produce* from any given quantity of material, to what is produced by our experienced flax dressers with the most costly utensils. In every stage of hackling in France and Flanders a brush is used, but of a very different description to any I have ever seen in Ireland, and, in my humble judgment, is well calculated to open the minute fibres of the plant, without injury to its substance or strength. One of those brushes I have purchased, for the inspection of the honorable board; and I doubt not, but its adoption by flax-dressers and spinners of fine yarn, will be found advantageous. In the construction of the tackling of the wheel for spinning cambric and lace, there is a material difference in the weight of the spindle, flyer, and bobbins, to those used in Ireland, the French being considerably lighter than ours, and the mode of applying motion to the bobbin is different, as it can be regulated with much more care and certainty than in the Irish wheel; the mode of placing the flax on the distaff also differs *materially* from the general practice. That an opportunity may be afforded to the *Irish spinners of fine yarn* of making trial of the plan followed in Cambray, without incurring any expense to themselves or the honorable board, I have procured a spindle, flyer, &c. for the finest yarn, which can be attached to one of the wheels in the Board's model room, and thus afford an opportunity for a fair trial of the French mode of spinning. It is here necessary to observe, that the yarn spun for cambric in France is *never reeled;* it is sold by the spinner on the bobbins, from which she winds it from the spinning spool, and which she receives back when it is wound off by the purchaser; the general custom in Cambray is, for those who spin *on their own account*, to sell the yarn to manufacturers, or dealers in that description of yarn, who are generally respectable, wealthy people, that keep establishments for warping, which they do from bobbins that the spinner winds on, and thus prepare the warps according to the several sets the yarn is suited for; those persons also prepare the yarn for the weft, and a weaver can be at once supplied with a warp and weft suitable to his business. Into one of those warping concerns I was introduced, and purchased a warp ready for the loom, and I there saw several hundred warps, of different sets, ticketed and prepared for the weaver. The loom for weaving cambric which I examined, differed little from a *good Irish loom*, except its being what the weavers call very short in the reach, but it was in every respect *well put together*, and made of *sound* and *stout materials*. The dressing used in weaving cambrics I particularly examined, and found it made of the *finest flour* that could be procured, which the weaver told me was always the case.

Having made every inquiry that to me seemed necessary to ascertain the *fact* of the general fabricks in Cambray being made from flax that had given seed, I next visited the proprietor of the most extensive bleach-green near Cambray; having communicated to that gentleman my desire to view his establishment, he with great politeness took me through every part of it, and explained every process; in this concern, two millions of French ells, each of which contains 1¼ English yard, were bleached, *last season* without *the aid of any kind of machinery*, every process being performed by men and women; on going through the various departments I reckoned 60 men and 50 women employed, the latter are generally engaged in the *finishing process*, that is, as the goods approach to their final colour, they are washed in soap and water in *large tubs*, and, if occasion require, brushed with a soft brush in those places where any *spot of ley* may *remain.* It is here unnecessary for me to enter into a detail of the process of bleaching, which is so well understood in the North of Ireland; but it may not be unimportant to observe, that the greatest pains are taken between every boil and buck, not to let the linen be exposed to the air, until every particle of ley be completely discharged from it. From every information I received throughout my tour, I could not learn that linen is ever injured in the bleaching process, either in France or Flanders.

From Cambray proceeded to Mons, in the vicinity of which large quantities of hemp are grown. On Monday met Mr. ———, at Brussels, who procured me considerable information relative to the several linen markets in Flanders.

From Brussels went to Aalst, and from Aalst to Ghent, and inspected the linen market of that city. At this market there were eight hundred weavers, and three thousand pieces of linen exposed for sale, from 5*d.* to 2*s.* 4*d.* per ell Flemish, which is ¾ yard English; gross value in market from seven to eight thousand pounds; this market is held in a large square, in which are placed a number of standards, marked with the breadths of the different kinds of linen sold in the market; the standards are placed at one end of the square, at sufficient distances to let the buyers pass between the weavers, who stand in parallel lines, in conformity with the respective breadths of their pieces as marked on the standards; those of the same quality likewise stand together, and all lodge their pieces on boards, raised a few inches from the ground. Every description of linens in Flanders being made up the full breadth, are placed on one end on the planks, and are in this state examined by the purchasers; previous to exposure for sale, every piece is inspected and breadthed by a public Sealmaster, appointed by the magistrates of the town, to whom he gives security, and engages to procure a sufficient number of deputies; after sale, the pieces are taken to a large measuring room where they are measured, not by a machine or a stick like the Irish yard* measure; they are drawn over a long table, on which is fixed, at the distance of five ells, a brass plate with a rise in the centre of it about four inches long, two inches wide, and an inch and an half high; of these tables there were six; two men attended each table, when the end of the first fold of the piece is drawn over the table to the opposite end of it, from where the piece lies on the ground, the man at the brass plate makes a stripe with red chalk on the piece where it rests upon the brass, calling aloud the mark, and so goes on marking, every time the piece is drawn over, until the end, when the number of times it passed are chalked on the end of the piece, with the odd ells less than five, which are ascertained by narrow brass plates let into the table, close to the side on which the ells, with their subdivisions, are marked; under the measurement-mark is stamped, the arms of the town, and the initials of the Sealmaster's name; this mode of measuring seems to give general satisfaction to the weavers, who have an opportunity of keeping an account of every time their pieces are passed over the table; in this manner above 200,000 ells of linen were measured the day I visited Ghent, and the entire business was done by one o'clock. The sum paid by the weaver for measuring is nearly the same as paid by our weavers, but the buyers make a deduction of fivepence per piece for the pay table, &c. and some other charges are made for town dues.

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* *This mode of measuring seems to me to be peculiarly applicable to the Drogheda linens, of the short measure of which constant complaints are made in London, Dublin, &c. &c. and I should most respectfully suggest a grant of one measuring-table for the service of that market.*

After having inspected the market of Ghent, returned to Aalst, and next day (Saturday) visited the linen market of that town, in which the same regularity in breadthing, sealing and measuring is observed, as in Ghent; there were about 1000 pieces of Linen in this market, value upwards of £3000; many of them were of a better description than the Ghent linens, and were from 6*d.* to 2*s.* 4*d.* the Flemish ell, the general breadths from one yard and half-quarter to one yard and quarter.

From Aalst proceeded on Saturday to Antwerp, where I remained Sunday, and on Monday visited La Blancherie Royale near that city, which was erected by Philip, king of Spain, when in possession of Antwerp; at this concern I was shown by the proprietor every process of bleaching the finest yarn used in the making of thread lace in France and Flanders, as at the bleach-ground in Cambray; every operation is performed without the aid of machinery, and the yarn washed by women, who sit in small boxes by the side of the river, and, while washing, are perfectly secure from wet. All yarn bleached for lace is previously twisted from the spools on which it is spun, and made into very short skeins, carefully lay and water-banded. In every operation of whitening this yarn the greatest care is taken, and the bleach ground, which is laid down in planets, is kept close cut at all times, and the yarn watered morning and evening with scoops. The boilers in this establishment are all small, and not capable of holding more than one cwt. of yarn each, yet the proprietor told me, he has had in one of them, 10,000 florins value of yarn at a time. The boilers are of hammered brass kept perfectly clean, with close covers that have vent holes to let off the steam, and in the process of boiling, the yarn is placed in a thin sheet; exclusive of boiling, this yarn receives the buck and gentle steeping in weak warm ley; it is in all cases finished by a steep in new milk, which is here considered actually necessary to give it the clear white, for which all yarn for lace made in France and Flanders is distinguished. The extreme delicacy of this yarn rendering it impossible to wring it in the usual way of other yarn, it is placed in a coarse cloth, resembling a sailor's hammock, both ends of which are fastened to two very large irons fixed in pots, one of them standing, and the other moveable, like a common ring; at the moveable end is a kind of fly wheel attached to the moveable hook, from which wheel there are projecting pins or sticks, like cogs of a wheel: when the yarn is carefully placed in rows in the bag or cloth, the fly wheel is turned, and as the pressure becomes greater at every turn, two men tread, one on each side of the wheel, on the projecting pins or cogs, and so give their whole weight to the fly, until by degrees they squeeze the yarn perfectly dry, and likewise give it a degree of softness, without in the least injuring it. The potashes used in boiling and bucking this yarn is at all times best sweet Alicant barilla, which is pounded and sifted through a copper seive. The proprietor having told me that he only bleached the yarn, and that it was finished and made up for sale by a person in the city of Antwerp, I called at the manufactory and purchased a small quantity of the yarn for the inspection of the honorable board, and which is sold at the rate of £47,786 13*s.* 4*d.* per ton. The yarn which I purchased is not of the finest kind, but I have every reason to suppose, from the enquiries I made, that it was spun from flax that had given seed, a strong proof that allowing flax to seed is no injury to its quality, if all the after-operations be duly attended to.

From Antwerp proceeded to Dordrecht, where I inspected several oil mills, on which large quantities of the linseed saved in that neighbourhood is consumed.

From Dordrecht visited the villages of Swyndrecht and S'Gravendaol, and examined several cargoes of flax, of this year's growth, from Zealand, particularly some grown in the vicinity of Zirczee and Targoes; this flax was of an excellent quality, was brought in large sailing vessels direct from the field, and had on it the seed, which is never rippled until it reaches the boer's barn; in transporting this article from Zealand, the greatest care is taken by every person employed, and every sheaf is counted into the boer's wagon; numerous crafts are employed in this business, which is considered one of great importance to the country, and *fast extending*, and it is to be presumed must be a profitable one, as a great number of wealthy boers who reside between Dordrecht and Rotterdam are at present extensively engaged in that branch of cultivation, many of them having *this season* grown in *Zealand* from 30 to 40 markens of flax, which measure is nearly equal to an acre and a half English, and for which they pay at the rate of £10 English per marken. For one season, one of the most intelligent of the flax boer's informed me that, *without rent*, the charges for sowing, weeding, pulling, drying, freight, rippling, and cleaning, on an average, were about 16*d.* per stone of 6¼ lbs. the entire of which goes amongst the peasantry, embracing every age of both sexes, and is in the flax district their principal dependance.

On Thursday, the 8th of August, proceeded to the village of Rysoort, situated between Dordrecht and Rotterdam, and which may be justly styled, the centre of the flax country of Holland, not only from the quantities of that article grown in its immediate neighbourhood, but because three-fourths of the flax grown in Zealand is conveyed there from the field, when sufficiently dry, to undergo the various processes of rippling, steeping, &c. Having remained in this part of the country for four days, the *entire of which time* I devoted to visits amongst the flax boers and peasantry, who were engaged in every process of flax preparation, (from rippling to bringing it to the break and swingle.) I had ample leisure to obtain a perfect knowledge of the *detail* of every process, which I humbly hope I shall be able to communicate in such a manner as may be satisfactory to your honorable board. The *time* chosen for staying amongst the flax-farmers in and about Rysoort was the most *favourable* that could possibly be selected, for all were performing every different process; and having in Flanders and France (where the crops are from ten to twelve days earlier) seen similar operations, I had an opportunity of judging of the merits of the different systems. Here I feel it my duty to state. that for *regularity* and *method*, in every operation, the plan pursued by the Dutch boers is to be preferred to any other. In all cases their mode of saving seed has decidedly the preference, in my estimation; and it may be necessary to add, and to impress on the minds of the flax cultivators in Ireland, who sow that plant as an *article of general* commerce, that, without the seed, the Dutch boers would consider their business a very unprofitable one. It is generally computed, that after all expenses of rippling, &c. the seed leaves at least from £8 to £9 the English acre; and one of the most convincing proofs that can be adduced in favour of the Dutch mode of flax cultivation is, that all the growers are independent, and many of them have, within a few years, risen from very humble beginnings to considerable wealth. In the progress of my several tours through the countries which I have visited, I made it a particular point to examine, with care and attention, the soil in which flax is grown, and to ascertain, if possible, whether these places possessed any local advantages for the cultivation of that plant, which were not also possessed by the growers in Ireland: as far as my humble judgment serves, I could not observe on this mission, nor call to mind from the experience of many years, that the South of Ireland does not possess every requisite to admit of her growing flax of the same quality, and to the same profit, as is experienced in Holland, which however cannot be done without obtaining the seed, and presenting the article to market in that merchantable shape, which must always insure a demand, and a remunerating price.

Why so general an opinion, as has prevailed in Ireland for a series of years, that flax which gives seed is not adapted for her fine linens, should have taken place, I cannot conjecture, nor is it here necessary for me to dwell on; but I can undertake to assert, without fear of contradiction, that I have seen on this tour, flax, the growth of Holland, Zealand, Brabant, Flanders, and France, which has given seed, fully equal in quality to what is grown in other countries, and applied to the manufacture of articles of as fine a texture as any made in Ireland. In a word, the growers of flax, in any of the countries I have named, would be considered as persons void of common understanding, did they not partake of every advantage and benefit which nature gives to the flax crop, or, in other terms, if they did not save the seed with the same care, as is usually bestowed on every description of grain.

In thus submitting my opinions, which I feel myself called on to do in obedience to the instructions of your honorable board, I wish to be *understood* as by no means recommending, that the cultivators of flax *generally*, *particularly* those in the *North of Ireland*, where the *linen trade* is of vital *importance*, should vary from the plan they have hitherto pursued, until they have had *full* and *ample proofs* by practical *experience*, that flax may be rendered suitable for the finest linens, and at the same time yield seed. To accomplish this object I would again respectfully suggest, that some arrangement be made by your honorable board to introduce in different districts the plan of cultivating flax, as practised universally throughout the Netherlands—a system that affords the industrious farmer a full remuneration for his labour and capital, and gives employment to thousands of the labouring poor, which, if attainable, in the present state of the peasantry in the West and South of Ireland, would be of the greatest moment. Annexed to the report which I have now the honor to present to your honorable board, I have given, under the head of *Observations*, a detail of the mode practised throughout the entire of Holland, &c. in every process of cultivation, and treatment of the flax plant, from the sowing of the seed until it was prepared for market. In thus following the instructions of your honorable board, I learned that permitting the flax plant to seed is not only found to be of the highest importance by the cultivators, as a matter of profit in that respect, but is likewise considered as adding much to its tension and produce of material, if properly steeped and treated in the after process; under this impression, whilst on my tour, I took the liberty of addressing your honorable board, and of suggesting to you such matters as then seemed to me likely to further the objects your honorable board has always had in view, that of promoting the general interest of the linen trade of Ireland, by improving the cultivation of flax; and I have now only to hope, that my humble efforts in your service in the Netherlands, may meet your approbation.

I have the honor to be,
My Lords and Gentlemen,
Your most ob't humble serv't,
PETER BESNARD.

To the Right Hon. the Trustees of the Linen and Hempen manufactures.

(To be continued.)

ALBION'S SIXTH LETTER TO HIS SON.

> *"And thou that stalk'st*
> *In pondrous boots beside thy reeking team,*
> *Thy day rolls on, exempt from household care,*
> *Thy wagon is thy mate, and the poor beasts*
> *That drag thy dull companion to and fro,*
> *Thine helpless charge, dependent on thy care—*
> *Ah! treat them kindly! rude as thou appear'st,*
> *Yet show that thou hast mercy."*

I now intend giving you a few observations on the horses of the Albion farm—these horses were the large Flanders' dray, and the hackney kinds; the former, a bright black color, about sixteen and an half hands high, ears short, nostrils wide, under the jaws wide, eyes prominent—neck, short, arched, deep and thick, requiring a very large collar—withers, thick, and inclining towards the back—shoulders very deep, and projecting at the collar bone—chest, remarkably wide and low ribs, very round and long—back, short and broad—loin, broad—rump, clifted, and joining well to the loin—tail, thick and nearly in a line with the back—fundament, small—sheath, large—and the whole body deep, short and well rounded—thighs, full, particularly on the outside nearly down to the hock, and also on the inside, where they unite—knees and hocks, large—legs, short, flat at the sides, and surprisingly strong made—feet, large and round—hoof, of a dark color and wrinkley; and the whole animal put together in the most complete manner—these horses formerly had manes nearly down to their knees, and legs covered with curled hair, with tails of an immense size, but of late, these peculiarities have got out of vogue; nor is the black color so much prefered as formerly; which is to be lamented, as it has induced people to cross them, with the view of getting stock of different colours, and of course a great many inferior horses will be produced.

These kind of horses, excited in a particular manner, the admiration of the Emperor of Russia, when in London, in the year 1814, where he viewed at several of the Porter breweries, from sixty to an hundred of them in teams, at each establishment, in harness of the best kind, with polished brass hames and mountings, engraved with the owner's names, and equipped in the best manner for carrying porter to the various sale-houses in that city.—These horses frequently sold during the French war, at from $500 to $1000 each, they being almost invaluable in the narrow and crowded streets of London, as it is said they often draw in a drag cart, full three tons each; and they rarely refuse to draw their very best, even if harnessed to a post, being cool in temper, and very good natured.

> "Affection to thy memory ever true,
> Shall boast of mighty loads that Dobbin drew,
> And back to childhood shall the mind with pride
> Recount thy gentleness in many a ride
> To pond, or field, or village fair, when thou
> Helds't high thy braided mane and comely brow,
> Or freely bore thy burden to the mill,
> Obey'd but one short law, thy driver's will,
> And oft the tale shall rise to homely fame
> Upon thy gen'rous spirit and thy name."

As I have nearly got to the end of my paper, and having no more by me just now, I must defer what I have to say on the hackney horses, until another opportunity. ALBION.

P. S.—Albion writes with a pen made from a "*Dutch* quill"—of course, it is slow and periodical in its movements, and it would be as easy to drive a "restive *Donkey*," as to force his little *Dutch* friend into action, when the *moon*, or *some other ruling planet* is unpropitious; however, in all probability, it will keep going on at its own jog trot, which is about the speed of a snail's gallop.

USE OF THE SWEET SPRINGS.

Directions for travelling to and using the waters of the Sweet Springs—given by the late deservedly lamented and celebrated Doctor Brown, to a much respected patient, who was far advanced in a pulmonary disorder, and on the eve of setting out for the Sweet Springs, in the hope of relief.—*Edit. Am. Far.*

DEAR SIR,

Agreeably to my promise, I set down to prepare you a few directions relative to the best manner of using the Sweet Spring waters. In pectoral disorders, to which class your's belong, these waters are only used as drink. The patients never use a cold bath.

Experience has uniformly shown these springs to be very purgative on first using them. Hence it has been found expedient to commence with very sparing portions. I generally have directed a gill three or four times daily for the first three days, encreasing them gradually till they can be drank without regard to quantity. These waters are highly efficacious over almost every secretion of the body. They promote urine and perspiration freely, and give great perfection to the digestive organs, as will be proved by the keen appetite for food soon acquired there.

On these pervading powers, which they so eminently possess, are reasonably conceived to depend their distinguished use in disorders of the breast, obstructions of which organ they seem so well fitted to overcome. While using this medicinal spring, patients generally find it best to discontinue any courses of medicines which they may have found proper to have before employed. It being only necessary to have occasional resort to medicine, to operate any accidental symptom which may occur—for instance, should a lax come on, either from a too hasty use of the water, or from catching cold, it is necessary to check it by occasional doses of either laudanum or paregoric. On the contrary, should the habit become costive by journeying, or any other cause, it will be proper to use on such occasions, one or two of the laxative pills which you shall be furnished with. It will also not be amiss to have a sufficient stock of those pectoral medicines which have been in use this spring, as you may find them serviceable on the road, or at some other particular times, even at the springs, should the weather be damp and rainy. Let your diet be such as you have been directed to use, as nearly as you can procure it. As a general rule, let it be light, and easy of digestion.

As the fogs are great and frequent in those elevated mountainous regions, it is not right to go out of your hut in the morning, till those vapours are gone. I have heard of much mischief from neglecting such precautions. In journeying from here you must be careful not to fatigue yourself by too long stages. Recollect that by travelling slowly at first, the great journey is performed, in event, with more despatch, safety and usefulness.

On the subject of bed and body clothes, let me remind you of the necessity of being well provided with flannel. That country is very cold through the morning and evenings. Before you get far from here, it is likely you, in your route, may pass over limestone countries, where the water is all of that kind. On such occasions, it is not uncommon for the travellers to feel the purgative effects of these waters to an inconvenient degree. On such incidents, have recourse to occasional doses of laudanum or paregoric, as discharges from the bowels in your weakened situation would be very undesirable. I do not recollect, at present, any other circumstance worth communicating to you.

I have only to add my sincere wishes for the success of your expedition, and my earnest prayer that the kind preserver of mankind may guide you to streams of health, which in due time, will remove all your infirmities.

GEORGE BROWN.

Friday Evening, June 8th, 1798.

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 1, 1823.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $8—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $6 50—New wheat, $1 25 to 1 27—Red do. $1 10 to $1 18—Rye. 50 cents—Corn, 50 to 57 cents—country Oats, 31¾ cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, hog round, $10—Pork, $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Buckwheat, none—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons 36 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $2 75 per bbl.—No. 2, $2 50—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 14 cts. per lb.—Eggs, 16 cts. per doz.—New Hay, $14 per ton—Straw, $8.

MARYLAND TOBACCO.—Extra Fine Yellow, $35 to $45—Fine do., $18 to $30—Fine Spangled and Red, $12 to $18—good Red, $6 to $10—common crop, $3 to $5.

Sales.—1 hhd. extra Fine Yellow, raised by Major John Graham of Frederick county, sold at $45 per hundred; a sample of which is left at this office, for the inspection of planters.—95 hhds, raised by Thomas B. Crawford of Prince George's County, say 28 Seconds averaged $6 50—67 First at $18 3-8—30 hhds. very fine Patuxent $10 to $25, by different planters.

Printed every Friday at $4 per annum, for JOHN S. SKINNER Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE, TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

No. X.

(Continued from our last.)

To whatever extent the agency of an intriguing, or log-rolling *policy is required in the support of an object, we may rest assured, that,* all is not right, *that the object itself must be destitute of real merit, in an equal proportion.*

91. But were the Potomac Canal in full operation, it must be conclusively evident to every person acquainted with the topography of the country, that to the great bulk of Frederick county it could be of little or no benefit without its appendages. It cannot be supposed, for example, that any farmer of common intelligence, in the vicinity of Westminster, Taney Town, Emmitsburg, Creager's Town, Woodsborough, or Liberty Town, would ever load up his waggon and drive across the country to the Canal, when he could, with much greater facility pursue a good turnpike road directly to Baltimore. The extra labour, and loss of time that would be inseparable from the frequent loading of waggons, then driving them to the Canal, there unloading, and perhaps storing the load, or otherwise looking out for a boat to transport it to the District; meeting most probably with several disappointments, and after being detained until late, having to drive home empty, in the dark; and also from not having gone to market, where family supplies were plenty and cheap, and could have been all laid in, in an hour or two, would be under the necessity of spending, perhaps a day or two, in sending here and there for sugar, coffee, tea and many other articles, at their advanced retail prices, are among the circumstances that would presently induce people to exercise a little cool and deliberate reflection. Thus it would presently become a subject of serious estimate and experiment, whether, under all circumstances an advantage would not, *in general*, be gained, except, within 6, 8, or 10 miles of the Canal, by resuming the old practice of using waggons instead of boats as the preferable means of transport, to and from market. Let none be deceived by the *delirium of an excessive Canal fever*. Our waggons are not yet to be thrown away. Neither, are our turnpike roads to be deserted. For those districts of country that are near to market, they will always be useful. It is principally for those *that are remote*, that boats and canals are essential. Farmers at a moderate distance who have horses that, *if idle, must be fed*, will find it an advantage to have their teams upon the road in the winter, instead of paying the cash for boat transport upon the Canal.

92. In addition to all these circumstances, which, it may fairly be presumed, would be estimated low at an average of 50 cents on a barrel of flour, exclusive of the winter hauling, I believe it is a fact, well known, that the Baltimore merchants are in the habit of *buying dearer* and *selling cheaper* than those of the District. On the article of flour I have understood that from 25 to 50 cents per barrel is the usual difference. The average of these is 37½ cents, to which adding the above 50 cents, and the low estimate of 12½ cents for the advantage of *purchasing return articles cheap*, the amount is one dollar per barrel in favour of turnpike conveyance. Thus it may, *very rationally*, be concluded that *this dollar, or more* upon every barrel, *for the estimate is very low*, in conjunction with the great advantage of winter hauling, would be certain to bring an *abundance of flour* by waggons from over the South mountain from about Hager's Town, and other parts equally or more remote, and nearly, or perhaps *the whole* from about Frederick Town, so that, under all circumstances, there appears to be great reason to believe, that, only a very small part of Maryland would remain to be benefitted by means of the Potomac Canal, *alone, without its appendages;* only a part of the two counties of Allegany and Washington, and a narrow slip of a few miles wide along the very margin of the Canal, East of the South mountain.

93. Hence it is evident, that if Maryland can, *at all*, indulge the expectation of any material advantage from the Potomac Canal, it must be through the medium of its appendages. Agreeably to a large map of the United States, by Samuel Lewis, the distance between Baltimore and Harper's Ferry, appears to be 58½ miles; between Bladensburg and Dennis A. Smith's bridge over the Patapsco on the Washington turnpike, (the two nearest extremities of the proposed cross cut Canal,) 25 miles. Consequently, by the proportion already explained (48) the estimated length of the respective water routes will be 95 and 40 miles, and the estimated cost of each at $10,000 per mile, 950,000, and $400,000. These added to $500,000 the appropriation applied for (85) and $1,850,000, the sum, is the estimated cost to Maryland of the Potomac Canal and its appendages.

94. The utmost expectation that can be indulged for this expenditure appears to be $83,333, that is, one third of my estimate of $250,000 from 10,000 square miles, which has been explained (83) to be $10,000 more than the estimate of the Potomac Commissioners, and an annual gratuity (86) of two millions to the public; which two millions are, in other words, the merchant's profits, and afterwards the means (90) of subsistence, habitation and clothing (90) to the population, amounting to 20 millions. But $83,333 profit on an expenditure of $1,850,000 is only 4½ per cent.; and it is presumed to be not only improbable, but morally impossible, for an assembly, more especially the intelligent Assembly of Maryland, ever to become so strangely infatuated as to make 4½ per cent. per annum their choice, when at the same time from 37½ to 50 per cent. per annum was *waiting*, (85) and *hoping to be honored with their acceptance*. Should such an enormous error, however, *in defiance of all reason and justice to the contrary*, be once committed, I trust, there would, at least, be intelligence enough in the community, *never again to put it in the power of any individual*, either pricipal or accessary, to repeat the like outrageous blunder.

95. High calculations, again, are made in favour of the Potomac route in another respect. By its patrons it is with great confidence held up to view as *the only channel* through which any opportunity is afforded of extending a Canal over the Allegany mountain, so as to form a navigable communication between the Eastern and Western waters. But as there is nothing more easy than for very zealous advocates to be mistaken, I will, if they please suppose it, at least, possible for them to be in an error (80, 81) upon the present occasion, until the fact shall either be proved or disproved by an actual investigation of the ground. In the mean time it may be expedient to offer for consideration some estimates tending to explain the great importance of such an investigation. It has been represented, that in the Potomac direction, the preferable route would be, *not to descend* the Yohogany, on account of its rapids and falls, and the rocky, confined and unfavourable ravine of its channel; but to continue the Canal along the most eligible route to the confluence of Cheat river with the Monongahela.

96. From Cumberland on the Potomac to the mouth of the Cheat, the distance, as measured on the United States map (93) before mentioned is 65 miles, which, by the proportion (48) formerly adopted is equivalent to an estimated water route of 106 miles, and for a Canal of this length the estimated cost at $10,000 per mile is $1,060,000. Upon this route the extra lockage would, of necessity, be very great. From the best data of which I have any knowledge, I am inclined to believe it might not be less than 1800 feet, of which the estimated cost at $625 per foot is $1,125,000. By a native of England, of known veracity, I have been informed that the expenditure upon some of the tunnels of the Canals in that country, where it has been necessary to arch them all round, has amounted to a guinea an inch, running measure. But let it be supposed that in the instance before us no arching would be necessary, and that the excavation might be effected for $2 and a half an inch, only 17 cents more than one half of the very reduced price of English labour, and at that rate the cost of 126,720, the inches in two miles, will be $316,800, which being added to the two preceding sums, the estimated cost of the Potomac connexion is $2,501,800, or rejecting the odd $1800, the estimate will be two millions and a half.

97. In a "Sketch of the improvements already made in Pennsylvania," published with a map in 1818, page 61 are these words: "On leaving "Middle Town we ascend (the Susquehanna) 23 "miles against a gentle current to the mouth of "Juniata. This is a large river, and may, with "few improvements, be easily ascended, at all "seasons of the year, when not frozen, to Poplar "run; from the head waters of which to those "of Conemaugh there is a portage of 16 miles; "and down the Conemaugh to the Allegany "the water route is perfectly practicable. It is "further stated that from thence the navigation "is good into the Ohio, and all the vast waters "of the West." To these accounts it is added, that "from the 5th of March to the 10th of May "last, (probably 1817) there passed down the "Conemaugh river, 59 flat-bottomed boats, loaded with bar-iron, salt and store goods from Philadelphia, and each boat carrying from 20 to "40 tons."

98. Thus it appears that with a portage of only 16 miles, this is already a route of business, which agreeably to the proportion (48) before adopted is equal to 25 miles of water route. But when I take into view the vast increase of population in the Western country; that in the state of Ohio, for example, it was but 3,000 in 1791; that in 1800 it was 42,156, more than 14 for one, in 9 years; 230,760 in 1810, and 581,434 in 1820, nearly 43 per cent. greater than the whole population of Maryland, it is evident that the vast burthen of trade that would be certain to require a passage in that direction, would render a Canal of greater length indispensible so as to ensure a greater and more certain supply of water, in dry seasons, for its river conveyance to and from the Eastern and Western extremity of the Canal.

99. Accordingly, it appears by Reading Howell's map of Pennsylvania, that the distance is 30 miles between the confluence of Middle Branch with the Franks Town branch of the Juniata, and the confluence of Little Conemaugh with Conemaugh river, at both which points it is probable the supply of water would at all times be sufficient. By the former proportion (48) the estimated length of Canal would be (49,) say 50 miles, and its estimated cost at $10,000 per mile $500,000. There is reason to expect that in this

direction the extra lockage would be still greater than upon the Potomac route, owing to the mountain being higher. To make a liberal allowance let it be estimated at 2,400 feet, which at $625 per foot, as before, would cost $1,500,000 and produce for the aggregate estimate of the Susquehanna connexion two millions of dollars. Thus the difference between the two estimated expenditures is half a million of dollars in favour of making *not the Potomac*, but the *Susquehanna* the medium of connexion.

100. My object in submitting the foregoing estimates for consideration has not been with any prospect of exhibiting to view the precise number of dollars and cents of expenditure that would be required; but to endeavour to explain *with certainty*, in what direction dollars and cents may be expended to the greatest advantage. In this, I trust, I have succeeded beyond contradiction. Under existing circumstances, it would appear to be impossible, for a single doubt to obtrude itself into any candid and intelligent mind upon the subject. Even in the economy of $360,000 on the article of fuel, were the coal to be equally well supplied from the Potomac, the benefit would be reduced in the same proportion that $1,850,000 the estimated cost of the Potomac Canal and its appendages, exceeds that of one million for a Canal to the Susquehanna; that is, it would be reduced in the ratio of 37 to 20, and instead of being $360,000, it would be only $194,600. Upon the same principle $83,333 to the stockholders, would be reduced to $45,045; and two millions towards supplying the population with subsistence, habitation and clothing, to $1,081,081. The sum of these advantages in favour of the Susquehanna may be thus represented:

	From the Potomac.	From the Susque'na
Economy in fuel	194,600	360,000
Am't to the stockhold's	45,045	500,000
Benefit to the population	1,081,081	12,000,000
	1,320,726	12,860,000
		1,320,726
Difference in favour of the Susque'na		11,539,274

101. Or, the aggregate advantage in favour of the Susquehanna may he more distinctly comprehended in the following form: By 1,121,121 the sum of the two lower amounts in the above table in favour of the Potomac, divide $12,500,000 the sum of the two opposite amounts in favour of the Susquehanna, and the quotient, which is eleven and one tenth, is proof positive from actual calculation, that leaving out of the question both the economy on fuel, and the advantage of half a million (99) in the cost of extending a Canal navigation over the Allegany, to unite with the waters of the West, the importance to Maryland, of a Canal to the Susquehanna is more than eleven times greater, in proportion to the required expenditure, than that of the Potomac Canal and its appendages.

102. This is evidence, in my estimation, at least, of a character too incontrovertible to be disputed. It appears to he sufficiently conclusive to carry complete conviction to every candid and intelligent mind, of the great and decided preference that is certainly and justly due to the Susquehanna Canal as the first and preeminent object of attention. Were even the most determined Potomac advocate to have a trial depending in court, of the utmost importance, and to possess equally invincible evidence in favour of his pretensions, he would, no doubt, feel himself entirely confident of success, unless he had reason to believe he was to be opposed by *bribery and corruption*, or the tantamount operations of *an intriguing and log-rolling policy*. Bribery and corruption are terms too familiar not to be well understood; but for the information of any who may be unacquainted with the origin of a *log-rolling policy*, the following short explanation may be useful: Among a neighbourhood of farmers in the interior of our country, should they happen to have parcels of their land greatly incumbered with heavy timber, it is a very common practice to make *log-rollings*, at which a number of them *help each other for help again*, in rolling and collecting the logs into large heaps, that are afterwards set on fire and consumed out of the way. Hence the very significant epithet of *log-rolling politicians* has been conferred upon that unprincipled class of law makers, who, descending from their incumbent duty, and the high responsibility and dignity of their station, debase themselves into creatures of mere barter and compromise for party purposes: *Come vote for our Bill, and we, in return will vote for yours.*

103. In the American Farmer under date 11th July, 1823, page 123 column 3, a Potomac advocate has preferred his address, *principally to farmers and planters,—you who cultivate the soil,—you are the strength and sinews of the state,—you ought to be, according to your importance, independent, to give tone to secondary interests, instead of being governed by them. Exercise your right of suffrage at the ensuing election, judiciously and independently; and then you will infuse your spirit into the next Legislature.* But I trust that the farmers and planters, the strength and sinews of the state, who are thus addressed and called upon to exert their energies, will be more guarded in what they do than to suffer the fire of party to consume their intelligence. It must be conclusively evident to you, that it would be an extremely injudicious *exercise of your right of suffrage*, should you infuse into the next legislature a spirit sufficiently obstinate and perverted to give any interests either *primary or secondary*, the very irrational and discordant tone of selecting one enterprise to the exclusion of another of more than eleven times its promise of real utility and importance to the community. Does that wrong-headed candidate for office really exist, who could avow himself ready and willing to make such a most unwarrantable choice? Does he unworthily breathe the air of Maryland? Permit me, if such be the fact, to appeal, most strenuously, not only to the farmers and planters, but to the whole body of the population *en masse*, to all who have any due regard to the future prosperity of the state, their own interest, or the benefit of posterity, whether it is not high time that an alarm were proclaimed aloud from Dan to Beer-Sheba, that a watch word were impressively given to every individual, to all classes of society: Be on your guard. Beware of that *log-rolling politician*. Put it not in his power to do you an injury. Withhold from him your votes, *to a man*, and reserve them for another who is better than he.

WILLIAM KENWORTHY.

AGRICULTURE.

WATER PONDS FOR THE USE OF CATTLE AND FOR OTHER PURPOSES.

(Concluded from page 146.*)*

Mr. Marshall suggests that "a pavement would be a more regular covering; and, if the stones were set in lime and sand, would not only prevent worms from getting into the mould, and upper side of the clay, when the pond happened to be dry; but would, in all probability, prevent weeds; and, when the pond required to be cleaned from mud, would be a regular floor to work upon." And the "only objection he has heard made to paving the bottoms of ponds, is, that it would be a temptation to cattle to go into the water, in hot weather; and, by standing there, would not only foul the water, but in time tread up the pavement, and injure the clay; whereas sharp loose stones prevent their going farther than the edge. If the stones made use of in a pavement were sufficiently large, the latter part of the objection would fall; and whether cattle standing in a pool, in summer, be detrimental or beneficial may, he thinks, be a disputable point." But that "whether or not the inside of the bason ought to be paved, the rim should certainly be a broad smooth causeway, with a gentle grassy slope from it; especially on the lower side; that the cattle may approach the water, without wading in dirt, to the injury of the bank: and without having sharp loose stones to walk and stand on, while drinking." He thinks that "a drinking pool, formed by a skilful artist, full to the brim free from weeds, and smooth round the edge, is, in a green pasture ground, as agreeable an object, as the eye can be entertained with," in such situations.

With respect to the "6, or the season of making them, the autumn is esteemed the best time, as has been seen above. Drought and frost are both enemies to new made ponds. In autumn, drought has generally abated, and a sufficiency of rain water may be expected in this season, to fill them before frost sets in. A covering of straw over the stones is the usual guard against the extremities of seasons." And where "a reservoir is formed in a slope, where the lower side requires to be raised with loose earth, it ought to remain a considerable time to settle, before the coatings be put on, otherwise, it is liable to settle afterwards, and crack the clay. He has seen an instance of miscarriage through this neglect. If there be much made earth requisite to be raised, the excavation ought to be formed twelve months before the claying be done," and if longer it is the better.

In speaking of the 7, or expense, Mr. Marshall remarks that though "it is not now twenty years since the discovery was made, the art is still partially hid under the veil of mystery; and is not yet become familiar to common farm laborers. In this neighbourhood, ponds still continue to be made, by men from the wolds; all of them, in reality or pretence, pupils of the first inventors." And "these men generally work by the gross; the price being in proportion to the diameter: but they seem, he says, to have no regular method of calculation" on the subject.

It is added that "ten pounds were formerly given, and may now be considered as a medium price, for twenty yards diameter; forming, claying, covering, and, generally, digging the clay, included; all carriage and extra labor being done by the employer. But in the early days of the art, and when two coats of clay were used, twenty pounds were, he says, given for ponds of this dimension." He states that "a circle twenty yards in diameter contains in its area 314 square yards. Therefore, each square yard of surface costs, at this price, seven pence-halfpenny." And that the solid contents of a cone, whose base is 60 feet diameter, and whose height is six feet is 209,4 cubical yards; each of which costs, in the above instance, eleven-pence-half penny." It is further stated that "five pounds have been given for a pond, twelve yards in diameter: which is ten-pence-half penny, each square yard of surface; and supposing it four feet deep, two shillings each cubical yard of water." And three guineas were given for forty feet diameter, and four feet deep, the excavation having been previously formed. This may be called four pounds for the gross; which is about sevenpence a square yard of surface; or fifteen-pence-halfpenny, each cubical yard of water." He adds that "the men, in the last case, earned about three shillings and sixpence a day, without extraordinary exertion. In the first-mentioned instance, the same workmen did (according to their own assertion) make more than two shillings and sixpence a day. But a large pond gives longer employment; and the business of pond-making being uncertain and inconstant, travelling workmen can, he says, afford to make a large pond at a cheaper rate, than a small one." And "the curve superfices, or superficial contents of the sides, of a cone twenty yards in diameter at the base, and two yards high, is, he observes, about 320 square yards. This in making a pond of those dimensions, is the quantity of coating: for each yard of which near 7½d. was given in the first instance, and less than 7d. in the last. Sixpence each square yard of surface to be coated, may perhaps be taken as a fair medium price." At present, however, work of this sort is performed at a much higher price as from ten pence to a shilling or more.

In order "to ascertain the quantity of coating to be done, he advises to measure the exact circumference or rim of the pit, when finally formed and adjusted for claying: this dimension multiplied by half the length (or depth) of the side (measuring from the brink, down the slope, to the centre) is the quantity of surface to be clayed and coated. The digging would (under this mode of calculation) fall proportionably heavier, on a large pond than on a small one; but this would be counterbalanced by the advantage above mentioned."

It is added that "the quantity of clay used, in the first instance, was about forty cart loads, fetched about three miles: in the last, about fifteen loads fetched one mile. The quantity of lime, in the former case, one chaldron; in the latter, half a chaldron."

On these grounds, he says, "it is plain that the larger the pond, the less in proportion is the expense. A reservoir, to contain two hundred cubical yards of water, requires little more than three hundred square yards of coating; whereas one to contain only fifty yards of water, would require one hundred and twenty yards of coating; consequently, a cubical yard of the former, would only cost (at nine pence a yard for manual labor, materials and carriage) eighteen pence; while the same quantity of the latter, would cost near two shillings and sixpence. This is therefore a point that should be attended to in this sort of work.

In speaking of the benefits of these ponds, it is remarked that, "the superiority of those made in the manner above described, to those which have formerly been made, by some other art, or which have been formed by nature or accident, may be mentioned. During the dry seasons which have prevailed of late years, it has been observed, he says, that newly made ponds retain a supply of water, when the waters of other stagnant drinking places are dried up. This can only be accounted for, he thinks, perhaps, by their perfect retentiveness, and by their being free from weeds, which convert to their own nourishment, and throw off daily by perspiration, a great quantity of water. Upon the wolds their excellence was, he says, most conspicuous:—while one man was driving his stock, three or four miles to water, his neighbours, "who had "*made ponds*" upon their farms, were free from this serious inconveniency. In many situations, artificial ponds may, he thinks, repay the expense of making, the first dry season. Driving stock to distant water, in hot weather, and in a busy season, is an expense, and detriment to the stock so driven, which it would be difficult to estimate in many instances."

This important subject is concluded by remarking that on "examining the ponds in this neighbourhood, which have been made some years, the evil effect of covering with loose stones is evident. As for one, two, three, or more yards round the edges, according to the time they have been made, the use they have been liable to, and to the steepness of their sides,—the stones are entirely displaced, or trodden into the clay; which is, by this means, exposed to the feet of cattle, and to the open attack of drought and worms. For a while, he says, the clay even thus exposed, preserves its retentiveness; but in time it is destroyed, and the most valuable part of the pond entirely lost." He adds that "this effect is so probable, so evident to be foreseen, that, on the first reflection, it seems astonishing so unsuitable a covering should be universally adopted. A beast when it goes into a drinking pit, necessarily throws the chief part of its weight upon its fore-feet; which, in the act of drinking, most especially are placed, as for the intention of forcing, whatever they stand on, down the slope, toward the bottom of the pit. Upon loose stones, laid on a steep surface, cattle cannot make a step, or move a foot without producing this effect in a greater or less degree, and, by repetition and length of time, the entire coat (except some few stones which happen to be trodden into the clay) must, in the nature of things, be forced into the centre." But this absurd practice "was first established upon the wolds, whose stone is of a perishable nature, ; a species of chalk; which on being exposed to air and water, and to the treading of cattle, unites into a cement, which, forming a regular casing, preserves the clay from injury, for a considerable length of time. Loose chalk, as a covering was, therefore, a good thought of the first inventors; (indeed upon the wolds there was no alternative); and it is not to be wondered at, that their pupils, mostly day laborers, should imitate the practice in this country, by making use of loose stones for the purpose." But "perishable or soft stones of any species, a strong rough gravel, or even sand, would, he believes, be better than loose, hard, unperishable stones." Though "in this neighbourhood, where stones of various kinds abound, or, in any country, where stones of a proper size can be procured, at a moderate expense, there appears to him to be no choice, with respect to covering. A regular firm pavement, strong enough to bear stock without an impression, would last through ages; and although the expense, in the first instance, would be something more than that of loose stones, its durability would, in the end, doubly repay it. Even the wold ponds, which have been made fifteen or twenty years, are many of them beginning to fail, and will, in a few years more, require to be fresh coated: whereas, a pond properly paved would, in all human probability, remain perfect, for at least a century. Where rough stones are used they should be placed with the smooth side downwards, upon the clay." And besides this the pavement of stones has, he thinks much less tendency to be disturbed by the pressure of the feet of the animals, from its being a sort of an inverted dome which acts as an arch against the materials underneath it. See *Rills* and *Drinking ponds*.

The following hints have been suggested by Dr. Anderson in his Recreations in Agriculture, &c. for collecting water in different cases for farm uses, in situations where it is not easily procured.

For this purpose he would "beg leave to direct the attention to one never-failing source of water in this island, which if duly husbanded, will certainly, he says, preclude the danger of want at any season for almost any purpose, either for man or beast that can ever occur. He here refers to the rain that falls upon the roofs of houses, which amounts to a much greater quantity than most persons are aware of. It has been ascertained by repeated experiments that in scarcely any part of this island does there fall less than 28 inches deep in a year. At this rate there will fall upon every square foot of roof of any house above seventeen gallons and a half of water; or upwards of two hogsheads and a half on every square yard. At that rate, a house of thirty feet in length and twenty in width (which is not larger than an ordinary cottage), would collect one hundred and seventy-five hogsheads in a year, which would afford the expenditure of half a hogshead per day. There are few farms with their offices that have not roofs to ten times the extent of the above; so that were this water all preserved they could expend at the rate of five hogsheads a day throughout the whole year, which would be sufficient for a very extensive stock of cattle. But when we consider that in almost every situation cattle can be easily supplied with water from other sources for the greatest part of the year, it will appear very plain, that if all this water were carefully preserved, no farm could ever be in want of water for cattle or other purposes. All that is wanted then is, to discover an easy manner of collecting and preserving that water till it shall be wanted;" which he proceeds to show is not a difficult matter. "Few houses are now built, he says, without having spouts placed along the eaves to collect the rain-water and convey it into a reservoir, usually a wooden cask, for the purpose of washing. But this reservoir is usually so small as soon to be filled, when the surplus runs over and is lost. Instead of that let the whole of the water thus collected, be led by pipes to one place, where it may be let into a well, dug in the ground to a proper depth for that purpose, and covered at top. It will there be screened from the sun, and prevented from evaporation, so as to be kept sweet and cool as long as is necessary; and it is well known that no water is so pure and wholesome as rain water. But to those who are peculiarly delicate it may occur, that some impurities may be washed off by the rain from the roof, which they would wish to get rid of. This may be easily and effectually done. By sinking another well at a moderate distance from the first, making a passage between the two near the bottom, to be filled up with small clean sand and gravel, through which the water must percolate before it reach the last well; in consequence of which it will be perfectly purified. The pump for supplying the family should be fixed in this last well, where it will of course find nothing but pure water."

But "for the sake of cattle, if it be necessary, he advises that another reservoir be formed, also under ground near to the pump well, with which it may communicate by means of an opening at one side near the top of the well through which the superfluous water will run off when it raises above that level. This may be made in the form of a trough, covered as far as may be found convenient, and open towards one end for the cattle to drink, without allowing them to set their feet in it."

In cases "where the house is upon an eminence, it will be very easy to convey the water from this last reservoir, by means of a pipe under ground, to any convenient part of the fields, or the garden, where it may terminate in a box, to communicate with a trough for the cattle by means of a ball-cock, which always allows water to flow into the trough as it is drawn off, and closes of itself when it is full, so as to keep it always full without ever running over. In this way abundance may at all times be had without any waste; and the pure element procured for the cattle, without any extravagance of expenditure. If pools are made in the lower places of the fields, the cattle may in these occasionally cool themselves: but if they have ready access to the troughs, they never will drink there. But for fields which are at a distance from the house, where the surface of the ground is not a dead level, wells of this sort may be formed by collecting the water that flows over the surface of the ground, during rainy weather, and leading it into these wells. But these reservoirs should be always covered, and only have an open trough at one place to allow cattle to drink. He supposes that by these very simple contrivances, many parts of the country that are now much distressed at times for want of water, may be effectually relieved, so as never to suffer any future inconvenience; and much expense in carting water to many villages might be entirely saved."

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Report of an inquiry into the mode of cultivating and treating Flax, in the Netherlands, &c. by Peter Besnard, Esq. Inspector-General for Leinster, Munster, and Connaught.

(Continued from our last.)

OBSERVATIONS ON THE MANNER OF TREATING FLAX IN IRELAND.

Soil.—In selecting soil for the cultivation of flax in Ireland, the best and richest that can be procured is always preferred, but from the number of persons engaged in that branch of agriculture, such is not always to be had. The country likewise presents so great a variety of soils, and the article being grown in small quantities, by poor persons, who are of necessity governed by local circumstances, that no rule can be named for the exact *quality* of ground under flax tillage, and it may be found growing in wheat, barley, and oat stubble, and sometimes in lea-ground, but more frequently after a potato crop, which is generally preferred to any other.

Preparation of the soil.—It does not appear that there is any given rule followed in Ireland, for the preparation of the soil for flax cultivation, every person pursuing his own plan, some ploughing deep, others lightly, some sow under the harrow in potato ground, without ploughing, whilst others plough two or three times, and more prepare with the spade.

Sowing.—The seed sown in Ireland is of various kinds, Riga, Dutch, English, Home-saved and American;* in the South-West provinces, the latter mostly prevails, and is decidedly the worst of any named, as it is subject to fall at every blast of wind, or heavy shower, and often brings with it a long twining weed, highly injurious to the plant; it is also subject to mildew, or, as it is termed, to fire. As to the quantity sown to the acre, it varies in every district, according to the quality of the soil, and description of seed; no given rule can therefore be named, but on the data, of all ground being equally suitable; four bushels to the plantation acre is calculated on as the quantity necessary. The time of sowing varies greatly, often from the end of March, to the first and sometimes second week in June.

Pulling.—In Ireland it is generally believed that flax should not be allowed to arrive at maturity, in order to render it fine and soft for the manufacture of linen; under this impression the cultivators pull it green, and in nine cases out of ten, take it at once with the capsule or seed* on it to the steeping pool.

That the seed of the flax grown in Ireland, for a series of years past, would, if properly attended to, have added considerably to the profits of the cultivator, may be estimated on a view of the following extracts† from the returns made to the Linen Board, and from which it appears that a sum scarcely credible has been lost to the country.

Rippling.—In taking the capsule from the flax plant in Ireland, where *it is but partially* done, the process is performed with machines, somewhat similar to those used in Holland, but not made on so regular a plan as they are in that country, where those implements are as carefully laid by, after the flax season, as any other farming utensil.

Steeping.—For this very necessary process there is no settled rule: the growers of flax, as in the case of preparing the soil, following each his own plan; whilst in the Netherlands, where flax is the best prepared, generally speaking, of any in Europe, one settled rule is adopted, and uniformly practised.

In Ireland, flax is steeped in every description of water that may be met with, without regard to the situation or dimensions of the pools, and it may be seen, in many instances, *several feet under water*, in bog-holes, whilst in other cases it is laid in running streams, near the surface, subject to floods and partial dryness; and it rarely happens, that two flax-growers follow one method of steeping in every particular; generally speaking, in placing the sheaves in the steeping-pool, no order is observed, but they are all promiscuously thrown in, often in large bundles of various sizes, and thus it lies, *heads and points together*, crowded and pressed down with stones, sticks, or sods, &c. by which means the discharge from the upper bundles frequently lodges on those below, and stains them in that irregular manner so much complained of. Again, the quantity of resin contained in the bole, so unnecessarily left on the plant, not only adds considerably to the general discharge of coloring matter, but also retards the fermentive process; to these injurious practices may be added, the bad effects arising from the partial exposure of the plant in the steeping-pool to the influence of the air, those parts on which the stones, &c. rest, to keep it down, being covered, whilst all the rest is exposed.

In taking flax from the steep, in many cases, great neglect occurs, the sheaves not being washed before grassing, and it often happens, that the middle ones, on which the mucillage from the upper sheaves had rested, are exposed to the air in that state, and thus become incrusted with the drops of the coloring matter discharged: of the ill effects arising from the improper treatment of flax in this process, in many parts of Ireland, but particularly in the West and South, we have innumerable instances, and daily complaints are made by the Northern bleachers of the difficulty they find in bringing to an even color, linen manufactured in the provinces of Munster and Connaught. This fact has been stated to me by many of the most respectable merchants in the trade since my return from the Netherlands, and I am satisfied, that unless the process of steeping flax, as practised in that country, be generally introduced into the South and West of Ireland, the cultivation of flax cannot be advantageously carried on, or extended, so as to become an article of commerce, nor can the linens made from flax, prepared as it is at present in those provinces, be as well finished for any purpose as if they were manufactured from flax properly steeped.

Drying.—The fuel used to dry flax in many parts of the *South* and *West of Ireland* is turf, which, like almost every other vegetable, gives out, on combustion, pyroligneous acid and empyreumatic oil, both of which are highly colored; and in cases where flax is badly steeped, and the mucillage not discharged, or strained by impregnated water, the acid and oil from the turf may be found to act as mordants, and so fix the colours, that the most experienced bleacher cannot completely eradicate them from linen made of flax so treated.—The difficulty of discharging stains in linen, the manufacture of the *South* and *West*, is well known to many of the factors in the Linen Hall of Dublin.

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* *In Pennsylvania the previous crop for flax culture is Indian corn, after which the ground is lightly ploughed,* once only, *in the month of March following; the seed is sown early in April, and the crop pulled in the middle of July. The twining weed that grows with flax in America is there called wild buck wheat.*

* *If, instead of suffering the seed capsules to go to waste, by throwing them prematurely into the steeping-pool, they were allowed to ripen, it occurred to me, that they might turn to account in a way that would have many advantages; for the seeds being known to contain a large quantity of oil, and as the expressed oil is used for the purpose of making an inflamable gas, now coming into extensive use for affording light, we might render unnecessary the previous process of pressing out the oil, and prepare the gas directly from the capsules. Impressed with this idea, I requested of my friend, Mr. Donovan, Professor of chemistry to the Apothecaries' Hall in Dublin, to make the experiment; which he most obligingly performed and found that the capsules, when exposed to destructive distillation, afforded the usual products of vegetables similarly treated. Pyroligenous acid, tar, and carburetted hydrogen, were produced, as in other cases, but with this difference, that the gas, which, under ordinary circumstances, burns blue, was so far changed with the vapour of volatised oil held in chemical solution, that it burned white, and possessed a tolerable degree of illuminating power. There was also a faint blue light surrounding the white: but there can be, in my opinion, but little doubt, that had the capsules been sufficiently ripe, and the oil fully developed in the seeds, the light would have been perfectly white.*

† *Return of flaxseed sown in Ireland for the last ten years:*

Year.	Acres.
1812,	73,088
1813,	52,404
1814,	61,903
1815,	91,444
1816,	93,695
1817,	57,527
1818,	83,312
1819,	77,755
1820,	91,728
1821,	80,785
	763,641

This flax, if treated according to the practice in the Netherlands, would have produced, at the most moderate rate of calculation in that country, of 20 bushels to the English acre, 15,272,820 *bushels of seed, and which valued at the low rate of* 10s *per bushel, or* £3 10s. *per hogshead, would amount to* £7,636,410.

Breaking and Scutching.—In Ireland those processes are performed in various ways, sometimes by mill machinery, with breakers and scutchers, and in other cases with every variety of hand implement that can be procured, often of the most simple and imperfect kind, and such as contribute much to the labor of the worker, and proves ineffectual in execution. In Munster and Connaught, those imperfect implements are most in use, and, until within the last few years, scutching machinery by power was unknown in those places. In Ulster, scutch mills are in very general use; that which moves vertically is most approved of in that quarter, because it is said to take less power, and is less expensive than that with the horizontal motion; the latter, however, are in *general use* in *Scotland;* but it seems as yet a matter of doubt in both countries which of the plans is the best, so much depends on the skill of the workmen, the state of the flax, and its quality.—It is, however, necessary to remark that no description of machine, whether worked by hand or by moving power, can be operatively useful, if the flax be not well prepared in every previous process.

(To be continued.)

An Essay on the principles and practice of Rural Economy, by G. W. Featherstonhaugh, Esq. published by the New York Board of Agriculture.

SECTION I.

This earth, as we all know, is a round and firm globe, carrying upon its surface men and beasts. These, however, would soon perish and the earth become void of inhabitants, if the means of preservation were not abundantly and conveniently provided for them. By a beautiful providential arrangement of our Creator, the earth is endowed with a capacity to produce vegetable matter, fitted to sustain and preserve the beings which inhabit it; and this vegetable matter, in obedience to the law which governs it, remains permanently where it first grew; whilst to men and animals, the power of sight and motion is given, to enable them to change their places in search of new food, and to perceive it when it is found —This capacity, which is in the earth, of producing vegetable matter, is not, strictly speaking, contained solely within itself; because the action of the sun and of the air we breathe, is necessary to unfold it. A globe of solid iron would not, probably, acquire the property of producing abundance of vegetable matter by exposure to the sun and air; nor would a globe of rich vegetable mould, probably possess that property without their influence. All the parts of creation depend harmoniously upon each other. The fertility of our earth depends upon the great luminary of our system; and the power of the sun, itself, may be derived from bodies extraneous to it, the chain of a dependence xtending through the universe, and ending only with Omnipotence. This property of producing vegetable matter, arises from the loose and friable materials upon the surface of the earth, being acted upon by the combined influence of the sun and air. It is a further providential arrangement, that all this vegetable and animal matter which is found upon the surface of the earth, when it comes to maturity, gradually decays and dies; and the remains, if collected and returned into the bosom of the earth, are there, by the agency of heat and moisture, converted again into such elementary substances as are the proper food and sustenance of new organized plants; but this admirable providence does not end here: The elements of which all matter is formed, are in this last stage, of a very light and evanescent nature, and consequently a very large portion, perhaps nearly the whole of dead organized bodies, from its levity, the exhalations of the sun, and the action of the wind, is carried far away from the surface of the earth, and apparently lost for the purpose of re-production; if this were true, the earth would be constantly diminishing in size, and its duration be limited; but Omniscience has guarded the whole. The atmosphere which surrounds the earth, is not only the salutary fountain of the air necessary to our existence and to the existence of all organized forms, but it is a convenient receptacle for the light bodies which escape from the earth. The heavier particles which float in the atmosphere are brought down by fertilizing rains, and the more evanescent ones, which are exhaled by the hot beams of the sun, are, upon the setting of that planet, condensed, and fall again by their own weight, with the kindly dews. Whatever falls upon the ocean, is converted to the sustenance of its innumerable inhabitants; and whatever is lodged on the highest mountains, is, by the agency of rain, washed into the vallies. The vegetation which covers the face of the earth, supports he herbivornus beasts and insects, and they, in turn, support the carnivorous class of animals. The varieties are innumerable yet no one kind is permitted to increase beyond its bounds. A check is found in the propensities of the varieties themselves; each in its turn, lives its appointed time, then decays and dies, and by its death, furnishes materials for new forms of bodies. Thus the whole of this wonderful economical system, is perpetual in its nature, as long as the Almighty hand that formed the universe, is pleased to continue it in its present relations. God, however, in this, as in all his works, has abundantly provided his creatures with the means of carrying on his fair scheme of creation, in a prosperous way; he has set good and evil, abundance and want, before us, and has left us free agents to choose betwixt them. We may, if we please, assist in the accomplishment of his intentions, by securing our comforts, and advancing the general interests of mankind; and we may, if we please, run counter to his benevolence; yet the power we possess of distinguishing betwixt good and evil, infers that we are responsible to God for the existence of that power.

The business of a farmer is clearly, then, to extract from the earth as much produce as it is capable of yielding to him; and when it has yielded to him as it can, and will do abundantly, he must return to that earth, a sufficient quantity of manure, to enable it to yield a new supply to him; for manure is the food and sustenance of plants, as they are of animals. Mankind flourishes by providing abundantly for its nourishment, and negligence of that great duty, produces famine and misery. He who cultivates an exhausted soil, without enriching it with manure, is acting in opposition to his general duty to God and to his neighbour. In a country like this we inhabit, clothed with thick woods, the first operation in farming is easy, and does not demand much skill. The cutting down of timber is achieved by strength. The decayed leaves and limbs of the forest, which fall upon the surface of the earth, furnish a convenient and valuable nourishment to the plants destined to grow there. This natural manure would probably endure for a very long time, but the almost necessary practice of burning those fallows, contributes to hasten its consumption, and dissipates a very large portion of its essential parts. It would be better for farmers to content themselves with one or two crops at most, from land in that situation; because some strength should be left for the future crop of grass. Grass must have something to nourish it, or it will die, and weeds grow in the place of it, and these new fallows, if not seeded down with grass seeds, will eventually produce weeds. There are few weeds that domestic animals will eat; the weeds, therefore, will go to seed, the seed will be deposited on the earth, and be scattered on the surrounding fields: and when the roots of these fallows are sufficiently decayed to yield to the plough, many of those pernicious seeds, which last for years, will be turned in, and the ground kept continually foul; whilst if the fallow is immediately laid down to grass, before it is exhausted, a rich and clean bite will be furnished, and the dung of the animals, particularly sheep, will strengthen the soil, and nourish and preserve the grass in a pure and clean state, until the ground is fit for the plough. The difference betwixt these two modes is, that in the one, an acre of weeds will maintain two or three sheep scantily, and when it is ploughed, a foul and indifferent crop; in the other, an acre of rich grass will maintain from six to ten sheep well, and when ploughed, will give a plentiful and clean crop. It is at this point, when the roots of the forest-trees are sufficiently decayed to admit the plough freely, that agriculture properly begins. —The roots are to be removed, and the stones are to be gathered, and built into substantial and convenient fences, with as much expedition as general circumstances will admit. By attending to this important point without loss of time, the farmer is in fact, enjoying the utmost extent of his means; for an acre of ground, incumbered with heavy roots, and numerous stones, is to all practical and useful purposes, scarcely half an acre; the tillage of which is attended with much trouble, and wear and tear of teams, ploughs and gear; besides it is impossible to cultivate the ground properly and profitably, whilst it is thus encumbered. A well cultivated piece of ground, is in a condition the very reverse of this; it is without incumbrances of any kind; it is as clean as a garden ought to be, and every inch of it is producing some profit to the cultivator. It would be a fruitless effort to advert to any particular method of ploughing amongst stumps and stones, or to endeavour to patch up by expedients, a bad course of husbandry. It is sufficiently obvious, that the true business of a farmer is to draw from the earth as much as it can yield; and this he cannot do without first clearing the surface of his fields from every obstruction.

But the natural impediments to a successful agriculture, do not consist entirely of those obstructions which are found upon the surface. Some of the richest soils, and which are to be found on almost every farm, even when the stumps and stones are removed, are incapable of sustaining a profitable vegetation, on account of the excess of moisture with which they are charged, either from their sunken situation, or the spungy nature of their component parts, and this excess is only to be diminished by the agricultural operation called draining. Delicate plants, proper for the food of domestic animals, do not flourish in swampy soils; their tender fibres must have a lighter bed to extend themselves in, and which should be sufficiently dry to admit the genial rays of the sun. This remark is particularly appropriate to clovers, which are tap-rooted. The Timothy or Herd's grass, however, which has a bulbous root, flourishes best in a moist rich soil; but in soils however rich which are continually saturated with water, the most valuable grasses will not thrive, and if they are not drained, coarse sedges, and tufts of bog grass will continually cover that portion of the farm which ought to bring in the greatest profit to the farmer. Draining, therefore, is an operation as necessary as ploughing, and ought always to precede it. In ordinary situations, where there are no obstructions above, and the declivity easy, the task is not so great, nor very expensive : a cut two feet wide made in the right situation, three feet deep, and narrowed to a foot at the bottom, is sufficient to lay the land dry for a great distance, if it is carefully cleaned out every fall ; for the distant water will in twelve months make itself small channels beneath the surface to the cut, which will be kept open by continual percolation : by this simple operation, lands which never produced any thing, are made to produce heavy crops of turnips, or grain, and become productive hereafter : the expense even when the labour is to be paid for, is nothing compared to the benefit. A laborer may easily make three rods a day, which at fifteen dollars per month, for board and wages, is about eighteen cents a rod. A cut of this description, with smaller ones leading to it if necessary, is amply sufficient, and will stand to all effective purposes in the place of those expensive methods practised in Europe. If it be an extensive bottom, and proper for a permanent meadow the cut may be enlarged to any width at the same expense, by varying the method. The plough and the scraper should be used instead of the spade, taking care to finish the banks with a neat slope to the bottom, by the spade and rake, and sowing a few grass seeds upon it at a proper season to take root before the freshets come on. If this be done in a proper manner, the grass will grow as well on the slopes and the bottom as on the surface of the meadow, and be cut with as much ease and advantage. Wide drains of this description seldom want cleaning out : The sod prevents the soil washing in. A cut of this description, which I made eight years ago in a piece of interval of 200 acres, has not wanted cleaning out till this moment.

Let us suppose all this done. Let us imagine a prudent man anxious to do well, and prepared to adopt a permanent system for the management of his farm. His well arranged dwelling and its out-houses, are conveniently situated on that part of his farm from whence he can survey the greatest portion of it ; this is a point of the first importance. If they are not protected from the inclement violence of the north-west winds of our climate by natural woods, he has provided against that defect by transplanting trees into proper situations ; he will feel the benefit of them more and more every year. If water can be led into his barn-yard from an adjacent spring, it is done ; and if there is no such thing, a well or a cistern must supply the place of it : His comfortable cow stable is divided into convenient stalls, where his milch and working kine are secured in the night time against the severity of the season, and are only turned out into the barn-yard from ten to four during the day : His yearlings, of every description, are to have the best food, and the warmest births ; for he knows they must be kept growing the whole winter, or they can never be expected to become perfect of their kind : His necessary pair of horses are well provided ; for they are to take his family to church, and his produce to market : His ploughing, he thinks, upon the whole, can be more advantageously done with smart oxen, though the horses are to assist a great portion of the season : He prefers mares too to horses ; for if an accident should disable one of them from working, it is not a dead loss, as he could sell her or keep her as a breeder : His fields are laid out into convenient divisions, and substantially fenced with stone wall, if stone is found on his estate ; for he reasons thus : "It costs as much to go into the woods to cut down trees, split them into rails, draw them to the field, and set them up, stake and rider them, as it does to lay a good wall. The rail fence must be righted a little every spring, and every four or five years must be completely re-set ; the storms too, often blow great portions of it down to the ground ; it never turns stock in a perfect manner, and in eight or ten years from the time the rails were split, they are all rotten, I shall therefore have to go into the woods and cut more timber : whilst the timber is thus wasting, the stones are occupying the ground instead of grass ; they are stopping the plough and harrow, increasing the blacksmith's bill, and for all the real purposes of farming, a field of four acres is really only a field of three acres of land, and one acre of stones ; whilst the same field enclosed with a wall, would contain four acres of land in a proper state for tillage ; would save a great deal of money in my tools, give me a permanent fence, and leave my timber standing in the woods." If there is not a run of living water in each of his pastures, he knows too well the importance of animals having access to water at their own pleasure, and particularly in times of drought, not to excavate a pond in some low situation, where the ground inclines most naturally for that purpose, and this is most conveniently done at the junction of four fields, where the occupants of each field can have recourse to the same pond. On clayey bottoms this is not an expensive operation : a pond of sixty feet in diameter, sloping from the edge to about seven feet deep in the centre, can be worked out with the plough and scraper, and will contain water enough in the driest season for four tolerably large fields. The size, however, can be accommodated to the field or fields, and the quantity of stock intended to be served. It is a most bitter piece of cruelty to leave animals sometimes a whole week without water, in the hottest part of the season, when any rough excavation, made in a day, would have sufficed to relieve them. On sandy and porous bottoms the operation is a very nice one, and more expensive. When the excavation is made, the sides raked smooth, and beaten down to a uniform surface, fine slacked lime to the depth of three inches, must be carefully spread over every part of it. The lime is then watered to make it more compact. Clay of a proper quality being already provided, and moistened enough to render it manageable, it is laid on the lime in small portions, and well beat down with solid beetles. A little water is occasionally sprinkled over to facilitate this work ; the clay is thus gradually laid on, till it is six inches thick, has acquired a proper temper, and an uniform consistency. No crack of any kind must be there, as it would carry off the water. Upon the clay, when thus prepared, coarse gravel or any hard materials of small size are evenly laid on to the thickness of a foot. The sooner the pond is filled the better, after it is finished ; and it is better if it is placed in a situation sufficiently high to prevent dirt from washing in and choaking it. The water lime so recently discovered in this state, and of which so beneficial a use is reported to have been made in the great canal, would be an admirable substitute for common lime. The object of the lime is principally to prevent worms boring in the pond, but the water lime, if used in sufficiently quantities, and in a proper manner, might possibly serve the purpose of the clay also. A pond of sixty feet diameter will contain upwards of seven hundred hogsheads of water, and may be completely finished, as I have been informed by an intelligent Yorkshire man, who has followed the occupation of constructing ponds in his own country, where they were first introduced, for about fifty dollars. A farmer thus prepared, deliberates upon the system he ought to follow in order to derive the greatest advantage from his land. Must he persevere in the common course of husbandry prevailing around him, or shall he abandon it in favour of another? In order satisfactorily to answer this question, we must first consider what is the nature of the soil and region we occupy. There are two systems into which husbandry divides itself : one, the raising of grain, the other, the raising of domestic animals ; and the soil and the region are the guides that point out to the farmer which of these two systems he ought to follow and adhere to ; for the laws of nature will prevail, and the utmost we can do is to assist her in her operations. Under the grain system, it is understood that a farmer depends upon that for all his resources ; and under the stock system, it is understood that he depends upon that for all his resources. A farmer who exclusively follows the grain system, is obviously acting in opposition to the laws of nature, and to his own interest : for when he has exhausted his lands, which he soon will do, he will have no vegetable and animal manures in sufficient quantities to restore them. The greatest error, therefore, may be committed on this side ; for if we reverse the matter, and suppose a farmer to follow exclusively the stock system, on a soil well calculated for grain ; the great quantity of manure that he would produce, would certainly ensure him a succession of excellent crops, whenever he might choose to change his system. There are countries, however, which have been so rich and fertile, such as Sicily, which is a volcanic country, and abundantly charged with fossil manures, that the ground has yielded continually the most abundant crops without any manure ; and there, undoubtedly, the grain system is the true one to follow. And there are countries where the soil is so poor, and the winter is so extremely rigorous, that grain can rarely be raised of any kind ; and it is in such countries that the stock system is the true one, because the dependence of the inhabitants must be altogether upon animal food. The rein-deer supplies to the Laplander all his wants. It furnishes him with meat, milk and cheese ; he uses curds in the place of bread ; his raiment is made altogether from its skin, and from that and its intestines, and its bones, he derives all the artificial subsistence which we get from flax, hemp, wool and wood. Betwixt these extreme points, there is a medium where they mutually support each other ; there the live stock keeps the ground in heart, and the ground keeps the cattle and the owner of them. The state of New-York is situated in that happy medium : in many parts, however, of the state, there are entire districts of country where, under this union of circumstances, one of the systematic characters predominates over the other ; and indeed frequently upon the same farm, soils so totally different in nature are found, as to indicate at once the particular uses to which they ought to be referred. In tenacious soils the loam, or lighter part of the ground, generally rests upon a bed of clay at no very great distance from the surface : the clay retains the moisture and keeps it sufficiently near the top to be within reach of the roots of the plants, which is the cause of the perpetual verdure that is exhibited in some districts : and as it is often found combined with an inexhaustable strength of soil, and a great elevation of country, over which continued currents of salubrious air are passing, as necessary to health in animals, as in man : such lands may be considered as the natural grazing districts of the state. In these situations, and under a proper system of cultivation, as fine crops of grain may be raised as in the most favoured grain districts ; but the system which is there imposed by situation, is that of raising live stock ; for there it is that the greatest quantity of vegetable matter can be comparatively produced in the course of the year. It is a happy reflection to those who inhabit such regions, that possessing a soil eminently calculated to furnish them with the means of taking the lead in the various breeds of fine animals, they at the same time enjoy the additional resource of raising abundance of every kind of grain. Yet it is susceptible of demonstration that the raising of grain in such situations, more than is necessary to our families, and the support of our animals sheuld not be a main object; but ought to come incidentally into the course of husbandry we are bound to follow.

It is not here the place to enter upon the many details belonging to the successful management of live stock, or to attempt to describe the various qualities by which one breed of animals of the same family is distinguished in excellence from another. Little attention has been hitherto paid to this important subject: Farmers have been hitherto in the habit of judging of the value of the breed from the bulk of the animal, which is totally wrong; but the country is rapidly advancing in improvements of this nature, and the finer breeds of animals will soon be sufficiently increased to afford every farmer convenient opportunities of acquiring an exact judgment in these matters. Every man should use diligence in doing this, and when he hears of a more valuable breed of any kind of stock, than that which he possesses, he should go without loss of time and acquire it, if it is convenient to him.

(To be continued.)

Editorial Correspondence.

MISCELLANEOUS ITEMS—*Extracted from Editorial Correspondence since our last, and touching, amongst other topics, the prospects of agriculture in Pennsylvania, New Jersey, Virginia, North Carolina, and Maryland.*

CHEAT—NAKED BARLEY—FIELD PEA—GRAPE, AND OTHER VINES.

Washington, (Penn.) July 19, 1823.

In this part of Pennsylvania, our crops, considered collectively, are unusually fine. Although many fields of wheat were destroyed by the fly, such as escaped turn out well. It may be set down at about *one fourth under an average crop.* The rye may be set down at about as much *above.* We have not had so fine a prospect of corn for many years. Oats remarkably heavy. Grass nearly double last year's crop. The season has been uncommonly wet. More rain has fallen during the last four weeks than fell the whole of the last two summers. This has produced a plentiful crop of *cheat;* if your friend "Plain Sense" were here, I could shew him plenty in my *timothy meadows*, where wheat never grew. This upsets his "first premises." One of my clover fields, where there has been neither wheat nor cheat for several years, is now one third cheat. A large portion of another of my clover fields is thickly set with a very troublesome article, commonly known here by the name of rag-weed. Now if "Plain Sense" will explain to me how this rag-weed got into my field, I will explain to him how the cheat got into his, without being obliged to resort to transmutation. I am clearly of the opinion that the cheat and the rag-weed are both produced precisely in the same way. I believe the seed was in the ground, and the open and the changeable winter froze out my clover roots, and the Hessian fly, or some other enemy, destroyed "Plain Sense's" wheat; and this furnished an opportunity for these pests to spring up. Let me here remark that nature will not be idle; and it becomes our place to keep her usefully employed, by furnishing the earth such seeds and plants as will produce the greatest quantity of wholesome and nutritious food for man and beast. I would ask the advocates for transmutation if any of them ever saw a stalk of cheat and a stalk of wheat grow from *the same root?* I have frequently examined and never found this the case. I have enquired of many others and have uniformly been answered in the negative. It is somewhat singular, that the change should be always so complete, as to leave no traces or appearance of the wheat, in any of the numerous stalks that frequently grow from the same grain. I would further inform "Plain Sense" that I have frequently seen rye put in on wheat stubble, and no cheat made its appearance. I am led to believe that the mistaken opinion that wheat will actually change to cheat, arises from the circumstance of wheat being a crop more liable to failure than any other we cultivate, and thus more frequently leaves room for the cheat to take its place.

The naked barley and field pea you were so good as to send me, both turn out finely. The pea, I think, will be as suitable for the garden as the field. The Egyptian millet does not promise well. It is not now more than half the size of the common kind, and no appearance of its going to seed. I am led to think it requires a warmer climate than ours.

I am pleased to inform you that the method recommended in the Farmer of planting the grape cutting, entirely under ground, has succeeded with me extremely well. A greater number than usual grew, and the shoots came up unusually strong. I also adopted the plan of protecting my cucumber and melon vines by boxes covered with millinett. I think it will answer an excellent purpose. We did not lose a single vine, whilst those of most of our neighbours were entirely destroyed by the striped bug.

I am very sincerely your's, &c.

Allentown, New Jersey, 15th July, 1823.

Our harvest is secured, and is abundant. Your agricultural eye, would be delighted with looking over, at this moment, the fine Indian corn counties of Moonmouth and Burlington; which are covered with the most luxuriant crops I have ever seen. Oats and potatoes look well; and the average of fodder will be exceeded. We begin to grow millet extensively. An excellent resource, whenever the early grasses fail. Upon the whole, regarding the aggregate of crops, our agricultural report promises to be more gratifying than it has been for many years.

The biped-lamb of which I informed you, continues to live. It can walk for miles without inconvenience, and even with rapidity.

STRAWBERRIES.

Mr, Skinner,

Notwithstanding the information very obligingly given by some of your subscribers on the subject of strawberries, there appears to me so many doubts and difficulties in the way, as to make some further enquiries necessary: be so good as to make them, although they are of less importance than many others. Can it be possible that after the cultivation of this berry for centuries, that there is no individual who can give us a systematic way of raising them with success? if not, is it not full time for us to devote a part of our researches that way? Can it be in general right, to permit them to be intermingled with grass and weeds? It is insinuated by one of your correspondents, that as our climate is a dry one, it may be beneficial; but on examination, the ground will be always found to be most wet or moist, around those plants which have been kept free from weeds, &c. I planted out last fall, several hundred sets, in drills three feet apart; one foot the near way, in very fertile ground—they have been hand wed four times in the course of the spring and summer, and looked very well, (bearing a few berries) until the last weeding, when I had the runners taken from them, shortly after which a few of the vines died, and the patch generally ceased to have its fine appearance and vigorous growth. Is it improper to have the runners taken off the first year, or at any particular time of the year?—I should be much pleased to obtain some light on the subject, as I cannot but suppose the great Creator has intended they should add to our health and happiness in their season.

I am, very respectfully,
Your's,
R. K. M.

The Editor unites with "R. K. M." in requesting information on this subject.

SALIVATION OF HORSES.

Moorfield, (Va.) July 1, 1823.

Mr. Skinner,

Some of your correspondents have expressed their opinions of the cause of the salivation of stock during the summer; as it affects horses in particular. As it seems to be a question of some considerable difficulty, and as there are a variety of conflicting sentiments upon the subject, I will submit to you my opinion also; having repeatedly observed its effects, and as often endeavoured to ascertain the cause.

The supposition that appears to me most probable, is, that it is produced by the mould on the grass, to which it is extremely subject. An attentive observer may, about sunrise, frequently perceive streaks of blue mould on the grass, and by reviewing it more closely with a magnifying glass, he can distinguish two complete rows of mushrooms, or fungi, one on each edge of the spear grass.—As the sun rises over the horizon, he discovers these to ripen, open at the extremity, and expose a small cluster of four or five seed, after which they soon disappear. About this period the blade is destroyed, and it becomes visible by the grass becoming dry—the mould is not so easily discovered in clover as in spear grass; the former resembling it in color more than the latter. I have for some time been impressed with the belief, that the salivation of stock is caused by their feeding upon this mould, or rather the grass, after the fungus had matured; and I have been almost confirmed in my opinion by the result of a practice we have pursued of confining our labouring horses on newly mowed meadows, from which the old grass is entirely removed. By adopting the above course, the salivation is effectually prevented, or at least considerably abated. In addition to the above practical proof, I have observed that our brood mares and younger horses, which are generally pastured upon our most barren lands, where the grass is not so luxuriant in its growth as to produce the mould, are scarcely ever affected with the above mentioned malady.

Respectfully your's,
ABEL SEYMOUR.

This subject really demands the fullest investigation: Is it not an evil of comparatively *modern date?* Is it not aggravated by wet weather, when vegetation is more luxuriant? Why is it produced by second crop clover hay, and not by first? Do not neat cattle and other ruminating animals suffer with it, although the effect is not exhibited by salivation, as in the case of horses?

We ask this question because the editor is now in his native Calvert County, where he has been struck with the extraordinary low condition of neat cattle, both cows and oxen.—He never saw weather more seasonable, or grass more abundant in the pastures, and yet the cattle as well as horses, are extremely reduced in flesh, while the latter only are slabbering at a degree, that one would suppose would exhaust them unto death.

☞ The aggregate of wood has visibly increased throughout this county, within the last fifteen years—the springs and streams of water have permanently diminished, and many of them are totally exhausted, while the land has improved in quality and product, beyond any improvement in the systems of cultivation and management—though in this respect, there is undoubtedly a change for the better. Asking some old people how it has happened that certain fields, to which not an ounce of manure has been applied since the memory of man, now display better crops than fifteen years since, they attribute it to the absence for many years past, of the heavy dashing thunder gust rains, which were formerly so common, and by which the fields were so often, and so *severely washed*. This may have its effect, but we rather ascribe the increase in the crops, especially of corn, where it is most visible, to a general improvement in the *structure* and *use* of the *plough*. Ploughing is *generally* better performed than it was before the publication of the late venerable Thomas Moore's treatise *on deep ploughing.—Edit. Am. Far.*

DYSPEPSIA.

Mr. Skinner,

I observe in number 12, of your 5th vol. "A Constant Reader" "requests that, you will enquire of some of your many correspondents, and publish in the American Farmer, directions for the treatment and cure of Dyspepsia." Having seen no reply to the request, I am induced to offer the result of my own experience; without entering into any investigation of the causes of this *fashionable* disease either remote or proximate. A rigid attention to diet, both as to *quantity and quality* is indispensable; I do not mean that sort of abstinence where the patient eats small quantities at a time, but by eating frequently, consumes more than people usually do who only eat at the ordinary and regular meals: beef, mutton or chicken, roasted or broiled, will be found as innocent, perhaps, as any other food. High seasoned dishes should be particularly avoided, as being not only pernicious in themselves, but by provoking the appetite to take more than sufficient; and for this last reason, spirits, wine, or strong beer should not be indulged in until after eating, and then sparingly. Coffee was found to disagree with my stomach, being generally thrown up by eructation soon after drinking it in a morning, if exercise was used immediately after. Tea and milk produced nearly the same result; which lead me to seek for a succedaneum; some warm beverage having become by habit, not only comfortable, but almost a necessary. Accident led me several years past, when riding, to chew the leaves, and sometimes the buds of the sassafras to allay the intolerable heat and pain produced by the highly concentrated acid on the stomach; the effect of which caused me to think of sassafras tea, which, in a few weeks, produced the most happy effect; the symptoms having been entirely removed, and no return having been as yet experienced, although five months have passed over. There are two species of sassafras, the one having a red, the other a white root—the white is much the most pleasant, and should not be made very strong. Sugar and cream may be used as with other tea. A little experience will teach the most agreeable method of preparing it. Candour induces me to mention a fact in my own case, which possibly, may cause medical gentlemen to doubt the efficacy of my nostrum. About six or eight weeks after commencing the use of the sassafras tea, the first joint of the great toe on my right foot was for the first time inflamed, and very painful for three or four days; and in a day or two after that, the outside of my left foot was so tender as to prevent me from bearing my weight on it. I should, myself, have believed that those attacks in the feet had produced the relief to the stomach, if that viscus had not been relieved, *two* weeks previously. More might be added, but you will, no doubt, think that I have already trespassed sufficiently.

If you think these observations worthy of a place in your paper, you are at liberty to publish them—without, however, giving my name, unless you may think proper to give it to a "Constant Reader."

Our corn crops are promising here—cotton only tolerable.

West River, A. A. county, Md. July 20, 1823.

I was much gratified by my visit to Mr. S. whom I found to be as you had represented, a most intelligent and interesting, as well as enterprizing man; and I beg you to accept my thanks for an introduction, which has given me so much pleasure.

His flax breaker is decidedly the most efficacious implement for cleaning flax, I have ever seen. The saving it makes in the labour of preparing this valuable product for market, will, no doubt, speedily increase the cultivation of it, and give a staple article almost as important to the middle and Eastern states, as the cotton is to the South. The same machine is used for threshing grain, which it gets out very clear from the straw, and although not so powerful as the threshing machine in use amongst us, yet its cheapness and the small power required to work it, (one horse only being necessary) must ultimately recommend it to very general use on farms of moderate size.

I examined his reclaimed marshes with much interest. They must become, when put in perfect order, an immensely valuable estate. The tide ebbs and flows about six feet. There is great doubt in my mind, whether there is sufficient fall of water below the surface of the marshes on the Chesapeake, to admit of their reclamation, without the aid of windmills, or other expensive machinery, to lift the water over the embankment.

PREVENTION BETTER THAN CURE.

July 9, 1823.

Mr. Skinner,

That it is a much more desirable object to prevent disease by removing the cause, than to be able to effect a cure, I think, will be admitted by every one. Those who are of opinion that Epidemics in our cities, particularly Yellow Fever, are of domestic origin, attribute them, in a great measure to the effects of foul air secreted in drains, cellars, wells and vaults. This noxious vapour escaping gradually, from the places in which it is generated or collected, is taken up with the atmospheric air, and I have no doubt, at particular seasons, becomes a preponderating component part of the atmosphere. Under these impressions it has occurred to me, that some plan might be devised, to get rid of this vapour as fast as it is formed. I would propose, in any situation where it is known that this vapour collects, to erect a column containing two funnels—it should be so high that the top would be constantly acted upon by a current of fresh air—over one of the funnels I would erect, (if I may use the term) a sheet iron wind sail, so constructed, as always to face the wind—this funnel should extend nearly to the bottom of the drain or cellar. The other funnel should be furnished with a similar apparatus, but arranged directly the reverse—it should extend barely into the drain or cellar—a strong current of fresh air would be thrown down through the first funnel, which would mingle with and take up the foul air through the second funnel, as fast as it could collect. It would be raised, by these means, so high in the air, that it would be effectually carried off before it could possibly have a chance of contaminating the immediate atmosphere in which we live.—This plan, when used for wells, may also have the effect of making the water much cooler, by increasing the evaporation. With a sincere wish that what I have now suggested, may lead to something useful,

I am Sir
Respectfully your's,
CAROLINIUS.

ELECTRICITY OF A CAT.

The Electricity excited upon rubbing the back of a Cat is well known, and that it is rendered evident by snapping noise and sparks of light. Mr. Glover in a letter to the Editor of the Philosophical Magazine, describes so intense an action of this kind, as to enable the animal to give a very sensible electrical shock. This effect was obtained at pleasure by Mr. Glover, and also by some friends. When the Cat was sitting on the lap of the person, if the left hand, were placed under the throat with the middle finger and the thumb gently pressing the bones of the animal's shoulder, and the right hand were passed along her back, shocks were felt in the left hand; and then the right hand was placed under the throat, whilst the left hand rubbed the back, the shocks were felt in the right hand. When the atmosphere had been favourable, and the Cat had lain some time before the fire, the experiment always succeeded.

Phil. M. lx. 467.

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 8, 1823.

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7—Howard street Superfine, $7 25—fine do. $6 75—Wharf, do. $6 00—White wheat, $1 22 to 1 30—Red do. $1 18 to $1 21—Rye, 50 cents—Corn, 45 to 50 cents—country Oats, 35 cents—Beef, 8 cents per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, hog round, $10—Pork, $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, none—Buckwheat, none—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons 36 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 50, scarce—Herrings, No. 1, $2 75 per bbl.—No. 2, $2 50—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 14 cts. per lb.—Eggs, 16 cts. per doz.—New Hay, $14 per ton—Straw, $8.

Maryland Tobacco.—*Sales* corrected from last report.—95 hhds. raised by Thomas B. Crawford of Prince George's County, say 28 Seconds averaged $6 50—67 First at $10 3-8.

Internal Improvement.

ON THE PARAMOUNT IMPORTANCE TO MARYLAND, OF A CANAL TO THE SUSQUEHANNA.

No. XI.

Independent of any advantage on fuel, (67) *or in extending a Canal navigation over the Allegany,* (99) *for* every dollar *of profit to Maryland from the Potomac Canal and its appendages, an eagle, in proportion to the cost, may be adopted as a moderate estimate* (101) *from the Susquehanna; with this important difference, that it is understood the enterprise for* securing the eagles *may be put into advantageous operation with an expenditure of* only one million, *whereas, nearly* two millions *will be required to* commence receiving the dollars.

104. The certainty of every conclusion depends upon the certainty of its premises. From uncertain premises, it is abundantly evident, that no certain conclusion can possibly be drawn. Under these views permit me to propose as premises *too certain to be doubted*, that according to strict justice and established usage, the profits of all partnerships are required to be divided in proportion to the inputs of the parties. Hence it follows, that were Maryland to appropriate towards opening the Potomac Canal $500,000, somewhat less than one third of the estimated expenditure, one third part of the trade of 10,000 square miles, that is the trade of 3,333 square miles of country (17) *by no means celebrated for its richness and fertility*, is somewhat more than would be compatible with *strict justice, and established usage*, to be received in return. But in relation to the proposed new channel to the Susquehanna, the case is entirely different. Were this Canal to be opened by the state of Maryland, Maryland would then be fairly entitled to the benefit of all the trade that should float upon its surface.

165. Considering, *also*, that the Baltimore market which is already excellent, may, in the course of a few years, by a due improvement of the great local advantages of its situation, be rendered *nearly*, or, perhaps, *equally* as desirable as that of Philadelphia, and more especially when we appreciate the *importance of* 80 *miles being saved in the length of every trip* in coming to and returning from Baltimore, it appears to be a moderate estimate to account the Susquehanna Canal capable of securing to Maryland, the benefit of the trade of two thirds, *at least*, of 30,000 square miles; that is, of 20,000 square miles of country (17) *inferior in point of fertility to no portion of the United States.* But independent of all the advantages of *superior fertility*, 20,000 square miles are equally as capable of producing a profit of six dollars, as 3,333 *can* be to produce a profit of one dollar. Owing, again, to the estimated expenditure for the Potomac income of dollars being greater (100) in the ratio of 20 to 37, than that for the Susquehanna income of six dollars, for one: it conclusively follows that, to be in proportion to the cost, these six dollars must be increased in the same ratio, thus: 20: is to 37 :: as $6: are to $11, and 10 cents from the Susquehanna, for every dollar from the Potomac; consequently, *an eagle for every dollar* cannot be otherwise than a moderate estimate. Q. E. D.

166. I am well aware that the foregoing demonstration, as well as the general term of my calculations, which correspond with it, are completely at variance with certain resolutions that have been formed, it is presumed, without the authority of correct information upon the subject, and also widely different from numerous confident assertions, which from anonymous individuals, and other incorrect sources have from time to time found their way into some of our public papers. As far, however, as has yet come under my notice, no better evidence than *mere assertion* has been produced in support of these opposite pretensions. But *mere assertion*, it is well known, is *no evidence.* It is so understood in all judicial proceedings, and would *there* be totally unavailing towards establishing any controverted claim whatever, were it only for a single cent in amount. It must, in fact, be conclusively evident from the very nature of the case, that *mere assertions* are too liable to be founded in error of opinion; too frequently detected in being destitute of truth; too completely susceptible of being moulded into any form, or coined in any manner, agreeably to the pleasure or the motives of their authors, to be suffered to have the least influence in the decision of a great public question, of the utmost importance to millions of the great family of mankind.

107. When the attempt has been made, and often repeated to obtrude *mere assertion* as evidence upon any occasion, and more especially in a case of superior importance, the inference becomes *irresistible*, that it is the only alternative of the parties; that it is, in fact, the only evidence of which they have it in their power to avail themselves. But it must be obvious to every intelligent mind that *mere assertion*, independent of all other evidence to give it credit, is of a character entirely too doubtful for any person to be under the least obligation to believe it. Were I, for example, to meet with a cart load of resolutions, and anonymous newspaper assertions, all declaring in the most positive terms that a snow-white swan was certainly *black*; or a coal-black crow, *white*, would it, *permit me to ask*, be incumbent on me, contrary to my own certain knowledge, to admit that such was the fact? Most certainly not. I should be perfectly at liberty never to believe that any *white swan, was black*; or any *black crow*, *white*, until good and substantial evidence were produced to establish the fact. In like manner every individual in the community is equally at liberty to disbelieve whatever *incredible advantages* have been, or may be asserted in favour of the Potomac Canal, until *conclusive evidence* shall be adduced to prove, *beyond doubt*, the reality of the facts asserted; or the certainty, at least, of its being capable of producing more than a dollar profit, *in proportion to the cost*, for an eagle from the Susquehanna.

(To be continued.)

TO THE EDITOR OF THE AMERICAN FARMER.

No 1.

THE JUNCTION CANALS OF POTOMAC AND SUSQUEHANNAH.

Dear Sir,

I am pleased to find the subject of Internal Improvement occupying the attention of the people of Maryland, and that its citizens of capital and intelligence, are turning their thoughts to the consideration of those plans, which will tend to advance the improvement of their internal navigation.—Sectional feeling appears to be absorbed now in the great question,—*what measures ought to be pursued, which will best promote the interests of the state?* We live at present in too enlightened an age, to be jealous of local advantages, morally speaking, purely accidental, the effect of certain favourable positions of country.—Our citizens have too much wisdom and liberality, to deny their support or good wishes to any scheme, which has for its object, the advancement of the public good; because its tendency is to benefit one particular section of country more than another. Our legislators will not regard *place*, but the degree of public *good* resulting from the location, and execution of any public work.—If there is one spot in a state which merits more privileges, and to which more legislative patronage should be shewn than to another, that spot is its *commercial emporium.*—In proportion as this rises in respectability and wealth, in the same ratio is the political importance of the commonwealth increased. We form our opinion generally, of the power of a state, or kingdom, by the *commercial* standing of its *Capital.* Under this view of the subject, the best policy for a state to pursue, is, to contribute by every means in its power, to advance the interests of its chief place of business; allowing it every privilege consistent with the rights of the people. The welfare of Baltimore, then, should be highly cherished by Maryland. No city is better located than this, to rise in commercial importance, provided its citizens do their duty; the state will find that its best interests are concerned in granting its patronage.—I find by the perusal of your valuable paper, that an effort is now making to place Maryland upon the high ground which its geographical position so fully entitles it to—may this effort be crowned with success. I have read with considerable interest, the various papers relating to the formation of a navigable *canal* between *Baltimore* and *Susquehannah*, and between *Washington* and the *Potomac above the Ridge.* The association of these two works you will recollect, was what I advocated in my treatise on the Inland Navigation of Maryland, published 1820.

The public are much indebted to your correspondent, Mr. Kenworthy, for entering into the detail he has, on this subject—his positions are very satisfactory, and I should judge his fellow citizens will rightly appreciate his valuable services.

In No. 6 of his papers, (section 48) speaking of the *distance* to canal, between Baltimore and the Susquehannah, he observes, I have stated this at *75* miles; but that he is convinced it must be more.—This I have *admitted* under the *same circumstances* of locality of canal, that he lays down; for instance, in page 96 of my treatise, you will find this position noted "If our views at present should be confined to the *Canal* of *Susquehannah*," (for the Potomac canal was also taken into view in stating the first distance,) ' then the estimates will stand as follows: "From Susquehannah above the falls of Conewago, *(allowing for the sinuosities of the canal to accommodate the hilly character of the country, supposing we should have to depend upon the head waters of Monocacy and Conewago to feed the locks)* 85 *miles*—at, &c.

My *former* distance of 75 miles is predicated upon the *capacity* which the *Potomac* canal would furnish, to choose our ground, in the elevated regions between Baltimore and the Susquehannah river, thus avoiding many a circuitous turn, which a more *depressed* head of water would subject us to—Mr. K. and myself therefore, may be both right in own calculations of distance.—But I think, the *rule* of *proportion* which he has assumed, to determine this distance, by taking the relative *difference* in extent, between the *land* and *water* route from *Philadelphia* to Susquehannah, and drawing correspondent results from the distance by land being given from *Baltimore* to York-Haven, is not correct in the case of our canal; for the local circumstances of the *water route* from *Philadelphia* to that river, widely differ from that of our canal, the former being confined to the *circuitous beds* of the Schuylkill, Tulpih ken and Swa ara rivers—whereas our canal, owing to the superior elevation of its summit waters, can be made to sweep along the most favorable grounds.

After clearing up this difference, permit me to take a brief view of this interesting subject.

It is with regret I have learnt, that an idea *still* exists, in the minds of some of your citizens, that it would be the most expedient plan, in opening a navigation between the Susquehannah and Baltimore, to *keep* to the *bed of the river.*—In so *important* an undertaking, as the one before us, I trust that we will allow our past *experience* to guide us to a *right* decision—we know how *insufficient* this *system* of improvement has been to our navigation—all attempts to render efficient the *natural* beds of our rivers *above* tide waters for navigation, where *obstructions* occur, have proved abortive, that is, they have not answered the ends contemplated; and the reason is very obvious:—every obstruction that is removed, increases the velocity of the water above and below, and frequently injures, if not destroys the navigation above—nothing is more difficult than to effect a safe and easy passage through the rapids of a river; because, often, when you have accomplished the removal of one impediment, you create another; thus, in nine cases out of ten, a greater evil is produced than is removed—neither science nor art can effectually aid us, whilst we contend with the *torrents* of a river, such as occur in the Susquehannah below York Haven.—If we succeed in overcoming the violence of these, and make a safe navigation, we must quit the natural bed of the river, and creep along its banks with a small portion of its waters, artfully using them to subserve the purposes we have in view. Independent of what our experience has taught us on the subject, the *practice* of all those nations that have had works of this nature executed, is *opposed* to keeping the *beds* of the rivers, when contemplating a great improvement in the navigation, whether on the ground of economy or propriety.—Since the introduction of canals, they are satisfied, that to attempt to remove the natural obstructions in the river, is like throwing so much labor and money away: they rather strove to push the navigation by *canals* far from them. I trust, therefore, we shall have too much prudence and foresight, to subject our hopes to disappointment, and our works to ruin or in utility, by attempting to remove the obstructions in the bed of our river.—Whatever work we do accomplish, let us make it answer the end for which it was intended, and permanent in its character. *Rivers are the natural drains of a country*, and are perpetually subject to interruption and change in their navigable capacities, from the torrents of rain which frequently deluge them. Where obstructions often occur, from rapids, and it is expedient to perfect a navigation through the section of country which a river waters, experience has shewn it to be the best policy to abandon its bed altogether, and substitute an artificial navigation; this practice most generally shortens the route, and reduces the expenses incident to the removal of the original difficulties in the river:—for a navigation that lies between a *grand inland* depot and a *sea port*, this rule applies more particularly.—That a navigation may truly benefit a country, it is necessary that the passage be performed with *equal ease, each way*,—that the *nearest* course should be taken to the *principal points* of the country; and for both these reasons the *beds of rivers* beyond tide water, must *most generally* be forsaken; because torrents in time of rain, which are extremely injurious to works of art, with the shoals in dry seasons; together with the current *ever setting one way*, will very frequently interrupt free intercourse, and render fresh water river navigation precarious.—True, there are some of our rivers to which these remarks will not apply in the *general*—for instance, in the case of the Susquehannah, whose navigable capacities are so extensive above tide water; but it *forcibly* applies in one point of this river, where the navigation ceases; the difficulties which occur here, seem to render all the benefits of the upper navigation comparatively nugatory.—Under such circumstances, it is doubly binding on us to adhere strictly to the rule laid down, to leave the natural bed. Nature has done much for the Susquehannah river, and the citizens of Baltimore would be wanting in attention to the interests of their city and state, to neglect *perfecting* its navigation; this, as has been shewn, can only be done by *leaving* its bed at York Haven, and constructing an artificial way.

The only question then ought to be, whether this *artificial* channel should course the *banks* of the river to tide water, or *strike across* the country in the *nearest practicable* route to Baltimore: the latter unquestionably, should be preferred, for its advantages over the other are so manifest—this will appear from the following premises:

1st. The great difference there is in the *distance* of the two routes to Baltimore—2d. The difference in point of *safety*, in transporting articles of produce, &c. to market, as well as the security given the works against *freshets.*—3d. The fine country which the direct route would pass through, and the value the canal would give to the lands through which it would flow—from the health enjoyed in this country, settlements and villages would be located on its banks, which we know would not probably be the case were the canal carried along the banks of the *river.*—These, among other reasons might be adduced, to prove the propriety of adopting the *inland* route in preference to that of the *river*—satisfied on this head, we will review briefly the plan by which I propose to effect this important object.

With sentiments of respect,
Dear Sir,
I salute you,
ROBERT MILLS.

Columbia, (S. C.) July 27, 1823.

* * *

The following papers were forwarded by a friend, in whose taste and judgment as to the designation of suitable subjects for our Journal, we have great confidence. That a plentiful supply of pure water at all seasons, and at the least expense, is a concern of the very first consequence to all farmers, nobody will deny; but as to the practicability of procuring it "in all situations," it would be one of those discoveries which we are wont to consider "*too good to be true*".—Ingenuity, it is true, may work wonders, but it must work by the aid, and not in violation of the laws of nature, and the rules of philosophy—The age of miracles has passed with the age of ignorance. In reference to the subject of finding water, and the point to which it may be elevated, to prevent the entertainment of any false hopes we thought it best to submit the extracts which have been published in so many papers without comment, to the consideration of one of the first teachers of mathematics and natural philosophy in America—and by him they were returned with the plain and satisfactory philosophical observations which follow the extracts in this paper.—*Edit. Am. Far.*

FROM THE UNITED STATES GAZETTE.

Messrs. Editors,—The two pieces under the head of "Hydraulicks," and "Directions for Boring for Water," &c. have been selected from a late European publication, and are furnished you for insertion, accompanied by a request that some of your ingenious correspondents would furnish such observations as to the comparative expense of boring and well digging, &c. &c. in our country as may occur, a circumstance that will prove particularly acceptable to

MANY.

HYDRAULICKS.

"The facility by which a constant supply of spring water may be obtained at comparatively little expense, by boring, may, through the medium of your miscellany, be made public. It is desirable to be known, that in almost all situations water may be obtained by this method at the expense of a few pounds; whereas the expense of sinking a well to the main spring, too often deters the party from attempting it. Should you consider this communication sufficiently interesting, I hope you will give it publicity, that persons in all situations of life may have the opportunity of procuring one of the greatest luxuries in nature—good, pure and wholesome water, in a short space of time, with little trouble, and at a trifling expense. Although some of the inhabitants of Tottenham have obtained a good supply of excellent water from deep sunk wells to the main spring, there are a great proportion who are obliged to buy water of the carriers, who procure it from the well on Tottenham green which was dug, and a pump erected at the expense of the late Thomas Smith, Esq. &c. in 1791. Mr. Mathew in the summer of last year, adopted the method of boring through the earth to the mane spring, at his farm in Broad lane, Page green, Tottenham, when he obtained a constant and copious supply of water from a depth of 120 feet, which rises eight feet above the surface, and flowing over, forms an elegant little cascade. It has neither increased nor diminished since the spring was tapped. Having succeeded on his own premises, he thought a similar experiment might be tried with equal success on the waste ground on the west side of the high road, opposite the gateway leading to the work house, and which would be of most essential benefit, not only to the inhabitants residing in that part of the parish, but to the public at large. This suggestion being made to the vestry, it was acceded to on the part of the Parish, and the work commenced. The ground was bored to the depth of 105 feet, when a fine spring of water issued forth, which rises 6 feet above the surface of the ground, through a tube within a cast iron pedestal, and flowing over the lip or edge of a vase, forms a bell-shaped continual sheet of water, inclosing the vase, as in a glass case: it is collected, and again conducted downward through the pedestal to the place of its discharge, out of the mouth of a dolphin, about eighteen inches from the ground for the convenience of placing a pitcher under. The quantity of water thrown up and discharged, is at the rate of fourteen gallons a minute. The peculiar advantages of boring the ground for water instead of digging, particularly at great depths, renders the former method of great importance to the public, since water is obtained by boring at a small expense, as is exemplified by the following table. This table shows the price of boring and well sinking respectively, at every ten feet of depth, from ten feet to two hundred feet, viz: Boring at *four pence* per foot for the first ten feet, *eight pence* per foot for the second ten feet, and *four pence per foot* additional and progressive for each following ten feet; and of well sinking at *two shillings and six pence* per foot for the first ten feet, *three shillings and six pence* per foot for the second ten feet, and *one shilling* per foot additional and progressive for each succeeding ten feet.

TABLE OF PRICES.

Price of boring.					Price of well sinking.				
£	s.	d.	$	cts.	£	s.	d.	$	cts.
0	8	4	1	85	0	3	6	0	77
0	10	0	2	22	0	1	0	0	22
1	0	0	4	44	1	5	0	5	55
1	13	4	7	40	3	0	0	13	33
2	10	0	11	11	5	5	0	23	33
3	10	0	15	55	8	0	0	35	55
4	13	4	20	74	11	5	0	50	00
6	0	0	26	66	19	5	0	85	55
7	10	0	33	33	24	0	0	106	66
9	3	4	40	74	29	5	0	130	00
11	0	0	48	88	35	0	0	155	55
13	0	0	57	77	41	5	0	183	33
15	3	4	67	40	48	0	0	213	33
17	10	0	77	77	55	5	0	245	55
20	0	0	88	88	63	0	0	280	00
22	13	4	100	74	71	5	0	316	66
25	10	0	113	33	80	0	0	355	55
28	10	0	126	66	38	5	0	170	00
31	13	4	140	74	99	0	0	440	00
35	0	0	155	55	109	5	0	485	55
0	0	4	0	7	120	0	0	533	33
0	0	8	0	14	15	0	0	66	66
0	0	4	0	7					

Since the introduction of this cheap and simple method of obtaining a constant supply of water, many of the inhabitants of the parish have adopted it, whose example is followed by many in the adjoining parishes, and also in the county of Essex, with universal success. The ornamental purposes also to which it may be applied are innumerable, and present themselves to the men of taste in endless varieties of forms, such as fountains, waterfalls, or basins for dressed grounds; for baths, or for ornament, as well as the uses of the garden and the conservatory; but the man of science will hereafter employ it as a principle of motion, and direct it to various mechanical operations.

Description of the tools used in boring for water, &c. &c.

"The first tool used is an auger: the shell part, which forms the hole or bore in the earth or strata through which it passes, is mostly from two and a half to three inches in diameter; the hollow part of it being about one foot four inches in length, and constructed nearly in the form of the carpenter's common auger. The rod parts are formed in separate pieces, of four feet long each, which screw into one another by means of what is usually termed a male and female screw, to any suitable length, one after another as the depth of the hole or bore may require. The size of the stem above the auger part is about an inch square, except at the joints, where, for the sake of strength, they are a quarter of an inch more. There are also a chisel and punch for screwing on, in going through hard gravel or metallic substances, in order to expedite the passage of the auger, which could not otherwise perforate such hard bodies. The punch is often used when the auger is not applied, to pierce or open the land or gravel, and give a more easy issue or discharge to the water. The chisel is an inch and a half or two inches broad at the point, and made very sharp for cutting stone, and the punch an inch square like the other part of the rods, with a sharp point also. There is a shifting handle of wood which is fastened with two iron wedges affixed to it, for the purpose of turning round the rods in boring, and also two iron keys for screwing and unscrewing the rods, and for assisting the handle when the soil is very stiff, more than two men being required to turn the tool; sometimes a windlass is used. The manner of using the augur in working of it is simply thus: two or three men are necessary. Two stand on a stage, erected about twelve or fourteen feet above the ground, who turn it round by means of the wooden handle, and when the auger part is full, they draw it up out of the hole, and the man below clears out the earth with an instrument for the purpose, and assists in pulling the augur up out of the hole or bore, and in directing it into it again, and can also assist in turning with the iron handle or key, when the depth and length of the rods require additional force to perform the operation. The workmen should be careful in boring, not to go deeper at one time, without drawing an exact length of the shell of the augur, otherwise the earth, clay or sand, through which it is boring after the shell is full, may make it difficult to pull out. A cylindrical pipe being placed in the hole, and driven downward with a mallet, and the boring continued, the pipe may be forced down to a greater depth, so as to reach the water or spring. Wells made in this manner are superior to those constructed in the common method, not only in point of cheapness, but also by affording a more certain and constant supply of water. In case the water near the surface should not be of a good quality, the perforation may be continued to a greater depth, till a pure fluid can be procured.

The pipes should be either of cast iron, or other metallic substance, and made to fit, with great exactness, the aperture made by the boring auger, or they would not be durable, but speedily become leaky and out of order. The best mode would, therefore, probably be that of having metallic pipes cast for the purpose, and formed so as to fit exactly upon each other, to any depth that might be necessary in boring for water. When old wells have become injured or tainted from any circumstance or accident, being previously emptied, the bottom may be perforated in a similar manner, so as to reach the lower sheet of water or main spring. The water will then rise in the cylindrical tube in a pure state, and flow into the body of the well or pump fixed for the purpose of bringing it up."

SIR,

Tottenham, from such imperfect accounts as I have seen of it, appears to be a valley, five or six miles North-easterly from London, skirted on one side by the river Lea, navigable to its junction with the Thames, about eight miles below. The place is principally composed of rich meadow ground, and so flat as to be flooded during a great part of the winter. It is, therefore, easy to conceive, that some of the surrounding hills, one of which, is said to be 400 feet high, may contain caverns, suitable for reservoirs of water, from which veins will flow in various directions, among the *strata* of rocks which form the common base that supports both the valley and surrounding hills. If then an orifice be opened down to any such vein, the water according to the general laws of Hydrostaticks, will rise to the level of the reservoir, or fountain head: and it will be quite immaterial, whether the orifice be three inches, or three times three feet, in diameter; the height, to which the water will ascend, being in both cases, the same. The introduction of an air-tight tube, however, may be necessary, as otherwise, the porosity of the surrounding mass, might absorb the water.

But surely no person in the least acquainted with hydrostatick principles, could for a moment suppose, that, by noring in the manner described, water could be had in any situation. The thing is absolutely impossible, in any other case than where a reservoir exists in a higher position than the surface where the water is to be raised: and even there, the vein penetrated must have an air-tight communication with the reservoir. No doubt, there are many situations, adjacent to, and in the vales between our mountains, and even hills of moderate height, where water might be procured in the manner described; but unfortunately, these are not the situations where it is most wanted; and to search for it where there is no commanding eminence of rock formation, capable of containing reservoirs, will be found to terminate in lost labour.

Your's respectfully,
JOHN D. CRAIG.

JOHN S. SKINNER, ESQ.

* * *

A prospectus has been circulated in Paris, of a new machine, which, if we may believe its inventors, will entirely overturn the present system of hydraulics. They engage to supply a small steam engine, which will raise water to the height of sixty feet, at the rate of fifteen quarts per minute. The machine will, it is said, coosume but a pennyworth of coals in an hour, in which time it will raise nine hundred quarts to the specified height. It is to cost six hundred francs, and to last more than a hundred years. No payment is required until the engine has been tried and given satisfaction; until it is fixed, and raises the water from the well to the roof of the house, which will thus be secured against the destructive ravages of fire. The proprietors likewise offer, at a progressive advance, machines which will raise double, triplo and decuple quantities of water, to double, triple and decuple heights, (that is to one hundred and twenty, one hundred and eighty, or six hundred feet,) and thus in infinite progression. They at first concealed their names, and this mysterious conduct excited suspicion; they have since, however, made themselves known, and prove to be Messrs. Crosson, brothers, both of them pupils in the Polytechnic school, and one of them a commandant of artillery, whose talents are said, in the Parisian circles, to inspire the greatest confidence. They keep their discovery a secret, and will not divulge it till they have raised subscriptions for twenty thousand inches of water according to their mode of calculating.—*U. S. Gaz.*

AGRICULTURE.

Report of an inquiry into the mode of cultivating and treating Flax, in the Netherlands, &c. by Peter Besnard, Esq. Inspector-General for Leinster, Munster, and Connaught.

(Continued from our last.)

OBSERVATIONS ON THE TREATMENT OF FLAX IN THE NETHERLANDS.

SOIL.—The soil preferred by the cultivators of flax in the Netherlands, is a deep loamy clay, or what they term (fat land) free from weeds, and capable of giving wheat, which is in almost every case the previous crop; except when land after producing madder is to be had, which is esteemed the best of all; but the cultivation of that plant, being rather limited, it is rarely to be met in quantity, compared with wheat stubble; it is, however, a general practice in that country, never to sow flax but in rich, good ground.

PREPARATION OF THE SOIL.—The mode usually followed in the Netherlands of preparing ground for flax, if from wheat-stubble, (the general previous crop) is, after reaping, to have it *immediately lightly ploughed*, and let to lie in fallow until the ensuing spring, when it is again *lightly ploughed*, preparatively to the sowing of the seed; but if grown after a madder crop, the custom is to give a light ploughing in spring, a little before sowing.

Sowing.—With respect to the seed sown in Holland and Zealand, it is invariably either Riga, or home-saved, none other being used; the latter is sown for *two*, sometimes three seasons, in succession, never longer, and, at the end of that time, Riga seed is again sown: but some of the rich and judicious flax boers, every year, sow a small parcel of Riga seed, so as to keep up a constant succession of fresh. When selecting seed for sowing, either of Riga, or home-saved, the most *scrupulous* attention is paid to procure it of the best and cleanest kind. As to the quantity sown in any given portion of ground, much depends on the quality of the soil, and the age of the seed, which *experience alone* can determine; but as well as I could collect information from the boers on this subject, comparing their measurement with the English and Irish acre, the quantity sown bears a due proportion to that of *Riga* seed usually sown in England and Ireland. The time of sowing is generally between the end of March and middle of April.

Pulling.—In the Netherlands, and in France, flax is always allowed to arrive at maturity, and is *never pulled*, *particularly* in *Holland* and *Zealand*, until the *seed* is perfectly formed, and the capsule brown and hard, so as to be easily disengaged from the stalk; when in that state it is pulled, and at *once* made into small sheaves, which are placed in stocks of eight to the stock; the root ends on the ground, projecting, and the heads meeting at the top in such a manner as to present the entire of them to the influence of the air; in this way it remains eight, ten, and sometimes fourteen days, according to the state of the weather; should occasional rain fall during this time, it is considered of great service to wash off the impurities and withered leaves that attach to the plant when ripening.

Rippling.—When the flax is sufficiently dried, it is carried to the barn, and the process of taking off the seed immediately commences; this operation in the Netherlands is chiefly done by ripples or iron pins, about sixteen inches long, and one inch square at the bottom, gradually narrowing to the top, and formed into squares: the pins are fastened in a block of timber, above four inches thick, eighteen inches wide, and made in the form of an octagon, the upper part sloped off, so as to let the boles run down to the floor; those pins are set at about a quarter of an inch asunder, thirty of them in each block, which is fastened by means of two staples and wedges, to a two-inch plank, that rests on trestles of a sufficient height for grown persons to sit on whilst rippling; two usually work at the same ripple, sitting opposite each other, and drawing the flax *alternately* through the teeth. During this process, great care is taken not to let it slip through the hands, so as to entangle the *root* ends, which in *every process* are kept as *even as possible*. When the seed is discharged the flax is again made into small sheaves, and, *in every instance*, bound together by platted cords three and a half feet long, made of strong rushes, that usually last for years, and are carefully put up from one season to another; when the entire quantity of flax prepared for rippling has undergone that operation, *the boles* are immediately run through a very coarse screen, sufficiently open to admit every particle of waste or dirt to pass through, so that they remain free of all impurities. The waste discharged in this manner is used by bakers in heating ovens, and the bole, by being thus cleaned, remains safe, and the seed can be kept for any time required. The mode most approved of for taking the seed from the bole, is to thrash it, which is done by a flail, the handle of which is similar to a common one, but the *working part* is not more than half the usual length, about four inches diameter; the *hulls*, after the seed is discharged, are sold at the rate of twopence the *sack*, for feeding *cattle* in the winter; they are chiefly bought by Brabant farmers, who mix them with various other vegetables and *carrots*, which they grow with their flax, in ground suitable; and I have seen, in *Brabant* particularly, numerous fields, with flax standing to dry, and the peasantry weeding carrots that had grown with it, and which appeared in a prosperous state.

Steeping.—This process, being the most important one which flax undergoes, and on which its value in a great measure depends, claimed my most serious attention, and occupied me for a considerable time, in observing it in detail, as performed by various steepers, and with flax the growth of different places. In general the steeping pools in Holland are similar to what are known in Ireland as *trenches* of water to drain and divide low grounds, such as abound in various parts of the South and West provinces, particularly where the soil is best suited for the growth of flax, and most like that of Holland and Zealand. Those trenches, in the summer months, are grown over with light grass and weeds, which are cut a little before steeping time, from the *edges* of the bank *only*, leaving the middle of the trench undisturbed. Previous to steeping, a sod or mud bank is thrown across each end of that *portion of the trench* required, which is seldom more than sixty to eighty yards. In making those banks the mud for a distance of eleven to twelve feet from each, is drawn with iron scrapers from the bottom and middle of the trench, and sloped against each of them, leaving a space of water free from weeds and mud, sufficient to put in a set of sheaves, and admit of a pool eight to ten feet between the cross-bank and last layer of flax. The steeping pool being thus prepared, a bundle of sheaves is opened, and eight of them laid in with small light forks, with which they are as *regularly* placed, as if laid with a line, each sheaf being put down with the root end towards the cross bank, and the top end towards the bottom of the pool; when the first layer is down, a second and third set of eight sheaves is put in, the root end of every *layer meeting* the *hands of the former* one, and all placed in an oblique direction. When *three layers*, or twenty-four sheaves, (which is *always the number* put in at a time,) are laid, the steepers, who are provided with scrapers and forks, draw from the bottom of the trench, *mud*, *slime*, *weeds*, &c. &c. just as it comes to hand, and which they place, to the thickness of six to eight inches, on the flax, leaving *only* as *much of the last* layer uncovered, as may be sufficient to receive the first layer of the next, and for which room is made by the removal of the mud, slime, &c. used as a covering for the former layer. In laying on the mud, great care is taken to plaster it together, and so combine it as to exclude the air and light completely from the flax.* The entire quantity being thus placed in the pool, nothing appears but a surface of mud. The next operation is to throw from that part of the *trench* not wanted, a sufficient quantity of water to cover the entire mass to the depth of six to eight inches: although the mode of throwing the water into the steeping pool is done by a simple contrivance, it is nevertheless worthy of observation, as it abridges labour, and saves time, points duly appreciated by the working classes in Holland. This business is performed by means of a triangle made of slight poles, placed across the trench near one of the banks; from the centre of the triangle is suspended, by a slight cord, a shute or oblong box capable of containing about five to six gallons, and which lies a small depth in the water; to the shute is attached a long handle, with which the steeper works it, and so throws the water into a cut made in one corner of the cross bank, by which it is conveyed over the mud; when this is done, the flax remains from six to thirteen days, according to its quality, the temperature of the weather, and in some cases the properties of the water and mud; and I witnessed myself the taking out of flax grown in Holland and Zealand, some of which had been steeped in seven days, whilst others required fourteen to prepare it. It is here necessary to observe, that the flax growers in the Netherlands carefully watch the flax during the steeping process, particularly after the fifth day, when they once in every twenty-four hours take out a sheaf with a fork, and examine it; if not sufficiently steeped, it is carefully replaced and covered. When the flax is found sufficiently steeped, it is drawn out with great care by forks, beginning with the sheafs last laid in, one sheaf only being taken out at a time, which is turned over into the water to disengage the mud from it, when it is gently washed in the pool, and left at the end of the cross bank for that purpose; after washing, it is laid in rows by the side of the pool to drain, from which it is spread on the grass, where it remains until the cultivator finds it ready for breaking; for this process, there is no defined time, every farmer judging for himself when his flax should be raised; but it is the uniform practice in those parts of the Netherlands and France where I have been, *to grass* all flax after steeping; no regard whatever is paid to the situation of the steeping pools as to aspect; those which I saw in various places lay in every direction; nor did it appear to me to be of any moment, in consequence of the total *exclusion* of the *light* and *air* by the covering of mud, &c. When removing the flax from the field to the barn, or store, it is again made into *small sheaves* nearly of an equal size, *twelve* of which are bound together similarly to what they were when going to be steeped.

Drying.—Should the flax which has been raised from the grass be found partially damp, which often happens in Holland, it is dried, or rather *aired*, on what is called a kiln, but which is merely a brick building in an open space, about twelve feet long, with a slight brick wall in the centre, and projecting walls at each end, about three and a half feet deep. The fire pit which runs the length of the entire building, is from two to three feet under the surface of the ground; the fuel used is always the shoves and other waste that drop in scutching, which is kept continually stirring, so as to throw a regular and gentle heat to every part of the plant, which lies across strong rods that rests on each end of the projecting walls; when the flax can be cleaned without this process, it is so done; but, when necessary, it is performed with the greatest care; immediately after the flax is sufficiently aired, it is put in a small building air-tight, where it remains until it cools: putting flax in this building after airing, is, I believe, what gave rise to the idea of its being stoved in Holland previous to cleaning, as I could not learn in the course of my enquiries on that subject, that such a practice had ever existed.

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* *Only* one *set of* layers *of sheaves in depth is put in each steeping pool at a time, it being found injurious to the flax to let the discharge of* mucilage *from one parcel blend with another. About one foot of water is in the pool when the flax is laid in.*

Breaking and Scutching.—In the Netherlands, flax is always broken and scutched by hand machines, for the most part with breakers and scutchers, similar to those known in many parts of England, where flax is much grown, and known also in some parts of Ireland. In one part of Flanders, a hand machine, similar to that described in p. 6, is used, and it appears to be very applicable to those districts where flax is grown in small quantities, and does not arrive to that length and strength of staple, produced in the rich grounds of many parts of Munster. In no instance, however, could I discover that any kind of machinery worked by moving power was ever used in Holland; but it is worthy of remark, that throughout the Netherlands, the flax plant is so carefully attended to, in every operation, that it breaks and dresses with great facility, and comparative ease, and presents a more finished and better article, than is to be found in most other countries.

(To be continued.)

FROM THE SOUTHERN PATRIOT.

INLAND SWAMPS.

Mr. Editor—I embrace the first moment of leisure, since my arrival in town, which was but a few days ago, to offer some remarks, in answer to the observations of a writer, under the signature of "*Old School.*"—The picture which this writer presents of the present situation of the inland swamps; although it partakes somewhat of the *caricature*, is in the main correct, and I fully agree with him, that to cultivate those lands, as they are now cultivated, is a species of gambling of the worst sort, in as much as it is sure to be attended with loss; but at the same time, I deny that a lucrative culture is impracticable, provided the only proper and feasible plan is adopted; which is by a regular and joint effort, to give them proper and systematic drainage; without this, it would be the height of folly to attempt their cultivation; and with it I am still persuaded that thousands of acres, which now lie waste and desolate, would then be made not only profitable to their owners, but highly advantageous to the citizens of Charleston.

This persuasion is not a little strengthened by the observations of "Old School" himself, who states, (and I presume he is accurate,) that from the year 1812, to the present time, there were only three years of drought, viz: 1814, 1816, 1818; every other year to use his own expression, was remarkable for excessive rain; if then in a period of eleven years, there have been only three years of drought, it unquestionably shews that the inland swamps, have to contend chiefly with but one enemy, which is a superabundance of water. Conquer this enemy, and you put them upon a footing with the best rice lands in the state; in as much as their fertility is undoubted, and there are few, if any situations, where with the proper care, sufficient reservoirs may not be established. Should, however, the planters of the *Old School*, still persist in keeping shallow reservoirs, and these extended over a great surface, instead of narrow and deep back-waters, where the evaporation cannot be great; if they will look on and suffer them, day by day, to diminish, until they become a mere puddle for snakes, and cranes to dive in; then they deserve like the frogs and fish, to be swallowed up alive.

Old School is certainly under a great mistake when he observes that the levels of the swamps, are every where lower than the levels of the rivers, into which *they empty* themselves; it is true, that some of the swamps are subject to inundation, from the overflowing of the rivers, but this is not applicable to such as run into tide waters, and it is to these that my remarks are chiefly to be applied. Our forefathers, says Old School, "were not wanting in industry, the whole country abounds with evidences of their perseverance," yes, truly, and these evidences are the accusing witnesses, that testify to our neglect; and methinks, I hear from the tombs where repose their ashes, the voice of censure and of sorrow. In vain have they laboured, if we are to abandon all their labours; in vain have they planted the monarch of the wood, if we refuse to take shelter under its shade. I disagree with Old School in the remark, that the cases of the cause of Gourie and the Pontine marshes do not apply; they were quoted by Rusticus to shew what had been done in other countries on lands similarly situated to ours, and in addition to these, I would add the example of the salt marsh company of New-Jersey, where the efforts of a few enterprising individuals, have been seconded by a company, for the laudable purpose of reclaiming marsh lands, in the vicinity of New-York.

Before I take my leave of this subject, I must be permitted again to call the attention of the citizens of Charleston to its importance. If this city is destined, as I trust it is, to be the grand emporium of Southern trade, we should embrace every opportunity of calling into action, all the resources of the neighbouring country, we should arouse the torpid energies of its inhabitants, we should encourage that enterprise which properly applied, would not only increase the supply of the chief staple of the country, but multiply in a tenfold ratio, those little articles of domestic comfort, with which we are now so miserably furnished; if our rice lands were successfully cultivated, we should soon abound in the best beef, pork, poultry, &c. Our live stock partaking in the abundance of offal which is afforded them during the winter, would be kept in good condition; whereas they are left at present to gather the coarse and scanty herbage which they can find in the woods, where they either die by hundreds, or are left in such a state of debility, as requires the whole summer to restore them to their strength.

Is it not extraordinary that a country possessing such capabilities as this for the rearing of live stock, should (instead of exporting the above-named articles) be indebted to the North not only for them, but for the very butter we consume at our tables? Does not policy require, that by making every effort to multiply and cheapen the necessaries of life, we may offer strong inducements to strangers to come among us, who are now deterred by the almost proverbial extravagance of living in Charleston, and at the same time by multiplying the temptations arising from the health of the city, which is now pretty well established, the cheapness of living, &c. direct our fellow citizens from the ruinous practice of spending their time and money in the Northern states; a practice which not only deprives their country of their services in time of danger, but drains the state and city of a considerable portion of their resources.

But it may be asked where are the laborers to carry these plans into effect? In reply I would observe, that in addition to those now in the country that would soon be employed, there are idlers enough in the city itself, such as supernumerary servants, vagrant tradesmen and others, who might then be profitably and usefully occupied, instead of being nuisances and pests, intent only in plotting mischief. I thank Old School for the polite manner in which he speaks of my motives, and I trust that this subject will be fully investigated, as I wish to advocate no doctrines but such as are founded on the basis of truth; nor to recommend any scheme which cannot bear the test of reason; but I can confidently assert, that although I were not personally interested, as I candidly confess I am, still it would give me great pleasure to contribute in the smallest manner to the prosperity of my native land, whose interests wherever he may be placed, or whatever may be his fortune, will ever be dear to the heart of RUSTICUS.

HESSIAN FLY.

We insert the following communication, with many thanks to the writer. He has certainly furnished some useful hints to farmers, which, if improved, may lead the curious enquirer, into a knowledge of facts relating to that destructive insect, the Hessian Fly, and a method of extirpating it, which may be of great importance to the farming interest generally.

Cape May, June 27, 1823.

Mr. Clarke,

I saw published in your paper of June 14th, an account of the Hessian fly, which says the fly deposites its eggs on the grains of wheat. I think the person who made that statement, has not examined the progress of what is called the Hessian fly, closely, or has he taken the fly we see before harvest to be the Hessian fly. The fly we see before harvest on the heads of grain, is a long black fly that is propagated from a worm, and this worm becomes a fly. It eats into the straw about the second or third joint; they are not numerous, and do but little injury to the grain, but the Hessian fly is innumerable, it is shaped like a locust, some are green and some brown, and are not larger than the fly that deposites the skipper in the cheese. There appears to be male and female, as some have eggs in them and others have not. The eggs may be squeezed out of them, and any person with good eyesight may perceive them without glasses. They deposite their eggs or skippers in the fall. As soon as the grain, (wheat or rye,) gets through the ground so as to have two blades, they deposite the eggs in the fork between the blades, and the nit creeps down below the surface of the ground, and in three or four weeks they change to the chrysalis or flax-seed state. They hatch out in the spring at different times and become a locust or fly, and begin depositing their eggs or nits again. You will find them from below the ground, to at or about the third joint of the straw. The spring crop does not hatch out till after harvest. I have more than once taken the stubble and put it into a glass jar, covered it with perforated paper, and very few have come out before the month of August. This fly deposites its eggs in grass or in oats. They do but little injury to any thing that grows fast, for in that case, the straw gets hard before the chrysalis; they do not indent it much. But poor land and an unfavourable season, in consequence of its being dry so long, like as the present has been, the chrysalis gets hard before the straw, and the straw perishes. For the information of those that may not know how to find the fly in the fall, they will look for the spears that are the darkest green, and stand the most upright.

I think that fall pasturing with sheep is an advantage to early sowed grain, as the spears that have the fly stand more upright, the sheep are apt to take them first, as the sap has ceased flowing up the main stalk, a number of young shoots start from the root, and they are clear of the fly at least till spring; and where the grain is bit off close it lets in the water and the fly perishes, which will lessen the quantity of the fly, that hatches out in the spring to deposite a new crop of nits. I think those deposited in the spring do more injury than those in the fall.

My object and wish in making this communication, is, that farmers may examine for themselves; and perhaps the result may be, that we shall be able to make some discovery that may be beneficial to farmers in general.

Sir, if you think the above worthy a place in your paper, you are at liberty to insert it.

Respectfully your's,
THOMAS BEESLEY.

TEA PLANT.

An interesting and encouraging account has lately been given in the National Intelligencer, of a considerable experiment made in North Carolina, in the cultivation of the tea plant—we shall copy that account before long—in the mean time, for the information of those who may have the good disposition and enterprise to extend the experiments, already made, and which have been attended with flattering results; we give the following, as a more rational method of curing the leaves, than any that has yet appeared in the Farmer.—*Edit. Am. Far.*

From the Monthly Magazine.

Account of the introduction of the Tea Plant into Cayenne, with observations on its culture.

The recent importation of some young plants of the tea tree into Cayenne, has induced the *Society for Instruction*, in Guiana, to circulate the following information respecting this valuable plant.

The tea tree does not grow naturally any where but in China, but it is cultivated in many gardens of Europe and America. It rises to the height of five or six feet; its leaves are eval or elliptical, from one to two inches in length, and of a deep and glossy green. Its flowers (which are always numerous, rather large, and of a very pleasing appearance) are white, and are each composed of a calix of five or six divisions, five or six petals, and a great number of stamina.

China and Japan are the only countries at present, in which the plant is cultivated in large quantities, and where the leaves are prepared in the manner in which we see them.

According to Kemfer, it will grow in any soil and climate; others say it prefers a pliable soil, and an aspect partly shaded.

At the age of three years it begins to be fit for use: and every six or eight years, the ground is replanted with new trees.

We shall now give all that we have been able to learn respecting the gathering and the preparation of the leaves, which is the only part of the tree of which any use is made.

In February and March, the cultivator gathers the young and tender leaves when they are only of a few days growth; and in consequence of their comparative scarcity, and their high price, these are generally consumed only by the rich. This is called the *imperial tea.*

The second gathering is made in May, when some of the leaves have attained their usual growth, but others are not so far advanced. Both of these are plucked indiscriminately, as they occur, and this mixture of the young and mature leaf is the *Bohea.*

The third and last gathering is made about the middle of summer, when all the leaves are at their full growth. This kind of tea is the coarsest, and is usually consumed by the poor.

Although each leaf is carefully plucked one by one, not to injure the plant, a labourer will gather from six to twelve pounds per day. The leaves are dried upon heated iron plates. They are continually turned with great quickness till they are so hot that they can scarcely be any longer touched with the hand. They are then thrown upon mats, from which the workmen afterwards takes them, one by one, and rolls them in his hands, while others fan them continually, to cool them rapidly, in order that they may preserve their rolled-up form.

This process is repeated several times, until all the humidity of the leaves is extracted: but the iron plates are heated less and less, and the rolling is made more slowly and with greater care.

When the leaves are thus made perfectly dry, they are packed in boxes, that they may preserve their perfume until they go into the market.

The use of tea in China, is of the highest antiquity. We are unacquainted with the motives which led the Chinese to drink this infusion, and are ignorant of the time when this custom commenced. It is conjectured that their first design, in using it, was to correct the water, which is said to be of a brackish taste in many parts of that vast empire.

It was about the commencement of the seventeenth century, that the Dutch East India Company introduced tea into Europe, and that the use of it first began. Its cultivation in the gardens of the curious, in this quarter of the globe, has been known for a century past.

We do not enter into the discussion respecting the properties or virtues of tea. We merely recal to the public mind, that it is an important object of commerce; and we believe that it will familiarize itself with great ease to the climate of this colony; and, unquestionably, its culture is highly worthy of the attention of the colonists.

The six plants which were brought to Cayenne, by the French ship of war *l'Ariége*, from San Salvador (Brazil,) have taken extremely well, up to this time. Three of them, according to the *Annales Maratimes*, are in the Royal Botanic Garden at Cayenne; and the other three are in the plantations of M. de Kerchove.

May we not hope that the Americans, who like the French, are independent of those intrigues which have deprived the British colonies of the cultivation of this plant, will be induced to attempt its culture in Louisiana and the Floridas.

TO THE EDITOR OF THE AMERICAN FARMER.

TO CURE BEEF AND KEEP IT SWEET.

Bowling Green, Va. July 20, 1823.

Sir,

We have for the last two years preserved our beef in so easy and simple a manner, and with so much certainty that it may deserve to be publickly known. In the year 1821, after hanging up our bacon to smoke, we put into the bacon brine, two or three pieces of beef that we could not well cover in the beef brine, they were permitted to remain there unattended to until late in summer, when our stock was pretty well exhausted—they were then used and found to be perfectly sound, and we thought possessed a peculiarly fine flavor. This circumstance determined us last year to try our whole year's stock in that way, for the purpose of avoiding the very great trouble of renewing and boiling brine as heretofore, and also of avoiding the partial loss every year sustained. We did so, and found it to keep sound and very sweet. We have made the same experiment this year, and the result is the same thus far, and feel confident we shall not lose a single piece. Our bacon is salted in large gum-troughs placed round the meat house; and when the bacon is taken out, the brine is collected and placed all in one trough, in which the beef then salted is put. Any beef that we kill after that period we salt in the usual way, and after a week or fortnight put in the brine with the other.

If you think the above worthy a place in your useful paper, you are at liberty to insert it—omitting the name of your well wisher.

FROM THE AMERICAN ECONOMIST.

The following communication on the subject of botts in horses, is from the pen of one of our most intelligent farmers, and may be relied on in every particular. I was exceedingly surprised to see the botts which had been cut out as mentioned towards the close of the article, alive, when the part of the stomach to which they were attached was dry and hard. This is indeed an extremely interesting subject, and it is to be hoped that the experiments made by my friend may lead to the discovery of a plan to dislodge those voracious worms from the stomach of the horse, ere they prove fatal to him.

Edit. Economist.

THE BOTTS.

Mr. Lundy.—In your paper of the 24th inst. I observed an extract from a Lexington paper, purporting to be an effectual remedy for the botts; and in which the author states, he has not known, an instance of its failure;—I have been so unfortunate as to lose this summer, two valuable horses, with the first of which I followed very minutely the directions of that writer;—but on the morning of the third day he died; and, upon examination, it was found the botts had killed him. There is no disease to which the horse is subject, more alarming in its attack, or difficult to cure, than when sickened by the botts. An attack of the botts is generally thought to be incurable; but I am led to believe the lives of many valuable horses might be saved in such cases by forcing down the throat some small pieces of fresh meat, followed by a brisk purge. I dropped into the stomach of a horse, filled with botts, a piece of fresh meat, and they seized upon it with avidity.—There is seldom any thing done for a horse, when afflicted in this way, until he commences rolling and tumbling about in great agony and distress; and it is not until the botts have fastened upon the sensible coat of the stomach, that he shows such symptoms of violent suffering, at which time nothing short of killing them will ever compel them to let go their hold. I sprinkled a quantity of pulverised salt petre and alum upon some botts, fastened upon the stomach of a horse; I also poured upon them sugar and milk, spirits of turpentine, and of laudanum, hot water* and whiskey; none of which would induce them to let go their hold. I then made a strong decoction of salt petre, of alum, of spirits of turpentine, and of laudanum, and dropped a living bott into a spoonful of each. The laudanum in two hours killed one. Those dropped in the other liquids I am satisfied would have lived forty-eight hours in them; and I believe the bott dropped in the laudanum, was injured in separating from the stomach. From the second horse that died I cut a piece of his stomach, containing on it about fifty botts, and hung it in the open air until it dried as hard as a board. At the end of three weeks I showed them to you, and you recollect they were still alive. In two weeks after that, many of them had formed wings, and were putting on all the appearance of a perfect bott-fly, at which time I killed them.

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* *Some writer on the subject of botts, in the American Farmer, denies there being botts in the stomach of a horse, while living, and says they could not exist in so much heat. I did not try them in boiling water, but in water warmer, I apprehend, than the fermentation in a horse's stomach to be, I believe they would live comfortably.*

A SUBSCRIBER.

Editorial Correspondence.

The Pines, near Greenville, Miss.
July 2, 1823.

Dear Sir,

The lupins which you favoured me with, were distributed among my friends—those I planted were attended to by myself, but all rotted in the ground before the process of vegetation commenced—all attentions from you in that way, will be most gratefully received.

I have made a full and fair experiment of some of your Northern or Eastern grasses, viz. the Timothy, Red Clover, and Orchard grass—they all do well on proper soils, when kept clean of our indigenous weeds and grasses; but as soon as they are left to their own exertions, they are smothered and gradually decline.—The best grass for a Southern summer grass, is the old Crab grass, it grows with very little attention, is abundant in product, and rich and fattening as food—when well cured, no Northern grass is preferred to it by Northern horses or oxen.

Your most obedient servant,
COWLES MEAD.

J. S. Skinner, Esq.

P. S.—The cotton crops on the Mississippi river, estimated to be between 70 and 100,000 bales, are lost by inundation.

EXTRACT TO THE EDITOR.

Mr. Skinner,

I would recommend to your correspondent, who questions whether wheat will turn to cheat, to make the following experiments.

1st. Take one pint of Lawler wheat (that being most subject to the metamorphosis) two pints of ground Plaster of Paris, and with water make the mass into a paste; roll it into balls, about the size of an English walnut, and at the usual time of sowing wheat, plant the balls two inches deep, and twelve inches apart, in a rich soil.

2d. Take of the same kind of wheat, and sow immediately on a rich land, at the rate of five bushels to the acre.

3d. Sow the same kind on a rich Timothy meadow, not very wet, about the 25th of September, at the rate of two bushels to the acre; I mean, sow it on the grass, and sow no more.

4th. Sow another parcel on good land at the usual time, and of the usual thickness, and suffer it to be grazed from the 12th to the 15th of May.

S———.

SEED—*Received for distribution since last notice.*

Sea Kale seed—From President Madison who says, "and with my thanks return a few seeds of the Sea Kale, saved from the small stock in my garden. My limited experience recommends it as well deserving a place in our culinary list of vegetables."

Ditto—of imported, and of domestic growth, from Doctor Samuel M'Culloh.

Seeds of Tobacco—*of a peculiar kind*—From the Hon. Secretary at War—with the following note, which is given, that reference to it may hereafter be made, as historical of its introduction, should it prove to be a valuable variety of that plant.

War Department, August 5, 1823.

Dear Sir,

I have just received a letter from Doctor James of the Army, from St. Louis, in which are enclosed some tobacco seeds of a peculiar kind, as you will perceive by the letter which I have the pleasure of sending you, and the seeds, requesting that you will be pleased to present them to the President of the Agricultural Society of Maryland, as the most certain way of securing the proper culture of them.

Doctor James, who was attached to the Topographical Department, and accompanied Major Long to the Rocky Mountains, was prevented from going on the present expedition by ill health, and other circumstances. He is at present stationed at St. Louis, and from his devotedness to botanical, and other pursuits of that nature, I hope his researches may be useful; and you shall be informed of any such that may be communicated to me.

I am very respectfully,
Dear sir,
Your ob't serv't,
J. C. CALHOUN.

John S. Skinner, Esq.
Editor Am. Farmer.

Saint Louis, July 11, 1823.

Sir,

Enclosed, are a few seeds of a species of tobacco, indigenous to the Rocky mountains, about Santa Fe, and to the hilly parts of North California, whence I received them by a gentleman recently from that quarter. Some plants have been reared from seeds of the same parcel, and are now growing in the garden of Gen. William Rector of this place. This species is abundantly distinguished from the common tobacco, also from that cultivated by the Aborigines of the Missouri, by the long and conspicuous foot stalks of the leaves; it is also, as I think, (judging from recollection,) distinct from the *rustico*, the only remaining species heretofore noticed in North America, and which has been met with, principally, if not entirely, in the vicinity of old French or Indian stations in the interior of New York. The leaves of this plant possess, as I am informed, in a great degree of concentration, the peculiar properties of the common tobacco, and it is probably much better adapted than that species, to the climate of the more cool and temperate parts of the United States.

I have taken the liberty to transmit the seeds to you, as I am persuaded you will attach so much importance to any attempt to spread the knowledge of our indigenous productions, as to cause them to be planted in the ensuing spring, and in the following summer it is probable a quantity of seed will be produced, sufficient to be distributed to every part of the Union.

I have the honour to be,
With great respect,
Your ob't serv't,
EDWIN JAMES.

Hon. J. C. Calhoun,
Sec'ry of War, &c. &c.

Gleanings from Foreign Journals.

Rum Jelly.—Among the novelties of the Parisian circles, rum jelly has become an universal favourite. It is made in the following manner. To a quart bottle of common white wine take a pound of sugar, which is to be reduced to a syrup, and clarified. Then take an ounce of isinglass, which put on the fire till it is thoroughly melted, pass it through a cloth, and mix it with the syrup half warm. When this mixture is nearly cold, pour it into the white wine, and stir it well so as to mix it completely. Then add a spoonful or a spoonful and a half (according to the strength which you desire to give to the jelly) of old Jamaica rum. Stir again this mixture, and pour it into the mould that it may take the shape in cooling, which you design to give it, if intended as a *plat* for the table, or into glasses, if designed to be handed round at an evening party.

Curiosities.—A well of extraordinary depth is now sunk at his Majesty's cottage in Windsor Great Park. During the progress of the work, many curious minerals have been discovered: at the depth of 360 feet, several fossil remains, among which is a very perfect specimen of an oyster-shell, have been dug out. At this immense distance below the surface, a very large tooth has also been found, which is in beautiful preservation. It is of double fangs, which are at present about two inches long, but have been evidently broken off. The face of the tooth, which is of the sort denominated a grinder, is about one inch and a half long by one inch wide. It is of a dark brown color, and bears a fine polish.

ON THE CASTRATION OF ANIMALS.

April 27, 1822.

Sir,

Some of my neighbours differ with me in opinion respecting the age at which calves and lambs should be castrated, and some of us keep our young stock twelve or eighteen months, and our lambs four or five months before castrating them, that they look more like bulls and tups than bullocks and wethers; thinking that, by keeping them thus long, they will grow larger and fat better. I am of opinion that these animals should be castrated when very young, before they are taken off the dam; there is not then so much risk; they suffer less by the operation, and that any loss in size is amply made up by the superior quality of the meat.

We shall be obliged if some of your correspondents will inform us, through the medium of your useful Journal, of the most approved practice among experienced breeders, as to the age when this operation should be performed, and the best mode of performing it, together, with any other information upon the subject they may be pleased to favour us with.

I am sir,
Your ob't serv't,
A SUBSCRIBER.

☞ The Editor agrees with the writer, *the younger the better*, provided that lambs be not less than six or seven days old, and calves not under a fortnight. The mode of operation is the simpler and safer, when the animals are quite young, but the description can hardly be made fit for a newspaper.—*Edit. Farm's Journal.*

ON ABORTION IN COWS.

Norfolk, September 1, 1821.

Sir,

In answer to the Queries on Abortion in Cows, in your Journal, No. 727, the most common cause perhaps is relaxation, from want of air and exercise. In most instances that I have known of cows slipping their calves, they have either been tied up in houses or kept in yards: the same cows, when ranging at will in a pasture of a sufficient size, have done well. Cases of this kind are by no means confined to cows. All breeding animals suffer from want of a good range, and cows may gain in flesh, but they will always lose in milk, when kept in a yard, besides the risk of abortion. In Arthur Young's *Suffolk*, which is better than any of his Reports, he blames the farmers of that county for throwing cabbages and turnips about their fields in winter for their cows instead of giving them in bins in a yard. The farmers were quite right; they did not want any calves slipt, and they wanted their cows to milk; and again no animal ever suffers from cold, which has shelter to retire to at will. In speaking of Suffolk, it may not be amiss to mention the excellence of its small polled cattle. Without any reflection on other breeds, they may be truly said to be inferior in real use to no breed of cattle on the island. They are excellent milkers, and fatten easily and early. There are no better cutters in Smithfield, where a good Norfolk or Suffolk home-bred is worth as much per stone as a Scot, which is the most that can be wished for.* Our larger breeds at per stone fail greatly. I never saw a Suffolk cow, such as is spoken of by Young, which would give eight gallons of milk a day, but I have had one which gave six gallons a day for more than five months, and milked well till within six or eight weeks of calving, when I chose to dry her up. This cow, eight weeks after calving, gave 11 lbs. 10 oz. of butter.

* * *

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at, and delivered from Calhoun's Inspection Warehouse, during the quarter, commencing on the first day of April, and ending on the first day of July, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	3284	40	336	3660
Number delivered.				2578

RICHARD MACKALL, Inspector.

TREASURY OFFICE, ANNAPOLIS, July 19, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at, and delivered from Piscataway Inspection Warehouse, during the quarter, commencing on the 7th day of April, in the year eighteen hundred and twenty three, and ending on the 7th day of July in the year eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	134			134
Number delivered.	255			255

JOHN C. MOORE, Inspector.

TREASURY OFFICE, ANNAPOLIS, July 21, 1823

True Copy, from the original report on fil in this office.

B. HARWOOD, Tr. W. S. Md.

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 15, 1823.

The Editor has received intimations from distant subscribers, who are friends of exceedingly good judgment, that the Patrons of this Journal are not well satisfied with having *so much* of it taken up with discussions respecting the Potomac and Susquehannah canal.—It is our inclination, as well as obvious, duty to consult the wishes and interests of our subscribers generally, and we must accordingly suspend for a time, further notice of these subjects.—The letter from Mr. Robert Mills, will be finished in the next Farmer, and then we shall reserve the pages which have been lately filled with these topicks, for matters more various, and more generally acceptable.

We embrace this opportunity to not only disclaim any unwillingness to be advised, as to the manner and the matter of our Journal, but to solicit hints from any quarter; being well assured that such hints will oftentimes prove useful and valuable, and that they will always flow from friendly motives.

* * *

BALTIMORE MARKET.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7—Howard street Superfine, $6 75—fine do. $6 25—Wharf, do. $6 25—White wheat, $1 22 to 1 26—Red do. $1 18 to $1 21—Rye, 45 cents—Corn, 45 cents—country Oats, 25 cents—Beef, 8 cents per lb—Live Cattle, $6 to $6 50 per cwt.—Bacon, hog round, $10—Pork, $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, $1 50—Buckwheat, $1 50—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons 35 to 36 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl.—No. 2, $2 37½—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 14 cts. per lb—Eggs, 10 cts. per doz.—New Hay, $14 to $15 per ton—Old do. $18—Straw, do. none.

MARYLAND TOBACCO.—Fine Tobacco, as last report, scarce—inferior qualities, plenty—no demand.

Valuable Lands For Sale.

The subscriber, agent for *William D. Mercer*, Esq. will offer at public vendue, *on Thursday the 28th of August, inst.* that well known, valuable property, called WORSELL MANOR, situate and lying in Sassafras Neck, Cecil county, Maryland, containing 550 acres (more or less,) about 40 whereof is first quality *Bottom Meadow*, which may be put in good mowing order, at very little expense. This property is now in a high state of cultivation, and no land in the United States has exhibited stronger proofs of the efficacy of plaster and clover. There is a large proportion of Wood-land on the farm

The improvements are, a large two-story Brick House, with a good Kitchen attached thereto; a large and excellent Barn, good Stabling, &c.

This farm is surrounded by agreeable and intelligent neighbors—it is only eight miles from the mouth of Apoquinimink creek, where Philadelphia prices are given for produce—it is also, but two miles from Bohemia river.

To suit purchasers, this property can be handsomely divided into two farms—three hundred acres sold with the improvements—each farm will retain a sufficient quantity of arable and woodland.

This property affords a fine prospect for the man of enterprise, and will be sold on accommodatng terms.

Persons wishing to view the premises, previous to the day of sale, can, (in the absence of Mr. Mercer) apply to the subscriber.

Sale to commence at ten o'clock, in the forenoon of said day, when the terms will be made known, by

GEORGE FORD.
of Cecilton.

Superior Cabbage Seed

The Subscriber hath received by the Fabius from Liverpool, a supply of very fine Early York Cabbage Seed, which he will sell at the low price of Four Dollars per pound. He has also lately received a fresh supply of that very excellent seed, called Early George Cabbage, the production of William Waitland, Esq. who has discovered the method of raising the seed, so as to prevent any of the plants from running to seed in the Spring.—This seed produces very genuine plants, which are very hardy in standing the winter; and they make hard White Heads from two to three weeks sooner than the Early Yorks.

In confirmation of the above, I here subjoin the testimony of some of the most respectable Gardeners of Baltimore market, who have made use of this seed four or five years.

Baltimore, July 14th, 1821.

We the undersigned, do certify, that the cabbage seed called Early George, which is imported and sold by Samuel Ault, is of the very best quality, being very early and genuine; likewise very hard in standing the winter.

John Mycroft,	Peter Hatman,
Thomas Lewis,	Samuel Regester.
Edmund Evans,	Valentine Lutz.

The prices of the above seed is 37½ cents per oz. or $5 per pound—the ounce will yield upwards of 2000 fine cabbages.—The time to sow this seed, is from the 8th to the 15th of September. Printed directions respecting the proper soil, treatment and cultivation of these cabbages, will accompany each parcel of the seed—orders, with remittances, from all parts of the Union, will be promptly attended to, if directed to "Samuel Ault, No. 78 Bridge-street, Baltimore"—and to prevent mistakes, impositions, &c., upon each parcel of seed will be pasted a printed label, in words as follows:—"Early George Cabbage Seed, imported and warranted by Samuel Ault."

N. B.—Any seed that may be offered to the public as Early George Cabbage, unaccompanied by the label as above, is spurious, as I am at present the proprietor's only agent in this country.

SAMUEL AULT.

Timothy, Orchard Grass, and Millet Seeds.

The subscriber has just received a quantity of each kind of the above described SEEDS, and now offers them *for sale*,

ROBERT SINCLAIR.
No. 1, Ellicott-st. Pratt-st. wharf.

On hand and for sale as above,
A general assortment of

Agricultural Implements.

ALSO,
GARDEN SEEDS,
CLOVER SEED,
And HERDS GRASS SEED.

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* *We conceive that the important difference between the Suffolks and the best improved breeds, is, that there are more inferior animals among them. In all our observations in Smithfield market although we see some good Norfolk and Suffolk home-breds, we notice more of these sorts, that are not well shaped, and not early feeders. Our correspondent's assertion is nevertheless true, that a good one makes as good a price as any other good one.*—EDIT. FAR. JOUR.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

Internal Improvement.

TO THE EDITOR OF THE AMERICAN FARMER.

THE JUNCTION CANALS OF POTOMAC AND SUSQUEHANNAH.

No. II.—AND LAST.

From the great elevation of country, intervening between Baltimore and the Susquehannah river, it was requisite that some efficient means should be found to surmount the difficulty, which here presented itself—namely, the want of a sufficient head of water, to feed the locks, which would be required.

The waters of Potomac, fortunately, offered such means. From actual levels taken, this river at Harper's ferry, was found to be upwards of 300 feet above the tide, and nearly twice as high as the waters of Susquehannah at Yorkhaven.—This fact was of immense importance, to effect our object, and it was embraced—I proposed therefore to bring in the *aid* of the Potomac, to furnish the necessary supply of waters, to the summit canal, and to the locks descending to Baltimore and Susquehannah.

In taking this river into view, I had a higher design to accomplish, than merely to make it subservient to the canal of Susquehannah, for I considered a canal from Potomac of equal importance; as affording to the seat of the general government, as well as to Baltimore, the means of communicating by the shortest route with the western waters, and also with the lakes, through the medium of the Susquehannah; an object of vast consequence to the operations of government, in time of war especially. The proposition therefore, to bring in the aid of the Potomac, to enable us to communicate by a canal from Baltimore to the Susquehannah at Yorkhaven, ceases to appear extravagant, and thus are we furnished with the most ample means, to surmount the chief and only difficulty in the way to forming such navigation. That the dividing ridge, between the waters falling into the Potomac and Susquehannah, is not higher than the waters at or near Harper's ferry, I infer from the characters of the streams rising on each side of this ridge, particularly the Conewago creek, which empties into the Susquehannah at Yorkhaven. This stream is known to be *not rapid*, nor interrupted with many falls. It rises near the top of the ridge, and meanders about 35 miles, before it discharges its waters. Now, if its head were 150 feet above its mouth, (and this is the supposed elevation of the ridge above the Susquehannah at Yorkhaven,) then would it have an average fall of 4 feet in the mile, which is sufficient to create a continuous rapid in its whole length, (for the velocity acquired by a stream, having this fall, is enough to move stones of some magnitude:) but this is not the character of the Conewago creek, consequently its head cannot be as elevated as we have supposed.*

It is of the utmost importance, wherever we do form a canal communication, between the Susquehannah and Baltimore, to take into serious consideration, the *canal* to *Potomac*, at the same time, because it is very questionable whether any waters can be found elevated enough, or in sufficient quantities near the summit level, to feed the locks—and without a full supply of water can be secured at all times for this purpose, our canal would be of little comparative utility—The reasonable prospects we have, that a *great trade* will pass through this channel, makes it imperative on us to attend to this particular. From the character of the country in the vicinity of the summit canal, where these streams rise, (a limestone region,) I should doubt their capacity to effect a constant and full supply of water, for such a trade: I may be mistaken, but I should think it indispensably necessary, that we should resort to a source which would not disappoint our hopes in this momentous business. The worth of the Potomac canal on this ground simply, is immense, and would probably justify the expense of cutting it, merely for a supply canal, to the locks—but its value is beyond calculation, when viewed as a part of that great channel of communication, which some day, not far distant, will be opened with the western waters: until this is completed, it will form the medium of intercourse with the rich and populous country, lying between the Blue ridge and the Alleghany mountains, *on each* side of the Potomac. I perceive by a late number of the Farmer, (just received,) that the *importance* of a canal from the Potomac above Harper's ferry, to Washington, is to be made a subject of discussion by Mr. Briggs; I shall anticipate very interesting matter from the pen of this gentleman, who possesses much valuable information on this head. As the canal of Potomac properly excites equal interest at Washington, with the canal of Susquehannah at Baltimore; and it is to be presumed, the execution of both will be simultaneous, I would take the liberty, through your valuable paper, to call the attention of the citizens of Washington and Baltimore, to the importance of forming a *union canal*, as the interests of both cities would be thereby consulted, and the expenses of the work considerably reduced.

The great advantages which would result to each of these places, by adopting this plan, can be easily pointed out; if they have not been already made manifest, a further proof of them will appear as we proceed. The route which I located for the Potomac canal, (in my Treatise, page 83,) would range through a populous, fertile and interesting section of country. The great elevation of its waters, would enable branch canals to be taken to every town and village in its vicinity, thus diffusing its benefits to a wide extent. It would run through, we might almost say, the heart of the state, and admit, were it required, to lead a branch down to the extreme end of Point Look Out; (this however is merely stated to prove its capacity, to promote the general interests of the state.) From the knowledge I have of the Potomac river, it appears to me, there are strong objections to the location of a canal on or near its margin, arising out of the precipitous and rocky nature of its banks, and from the depth of the ravines that intersect them, which would require a very circuitous canal. But admitting that every obstacle of this kind can be overcome, there are *greater objections* on *political* grounds, namely, the *partial character* of this canal, to subserve the *general interests of the state*, (for we must bear in mind, that the *Potomac* constitutes the southern *boundary* of Maryland.) Located along the banks of this river, a rich and populous section of this state and Pennsylvania, would derive no benefit from the work—only a small portion of either Maryland or Virginia would be advantaged, and the *chief commercial* city of the state, *not at all.* Whereas, by the route proposed, not only would the interests of *Washington* and *Baltimore* be equally benefitted, but those of a *fine region of country.* With such a prospect of general advantage to the state before us, we should not hesitate to adopt the plan which would make the canal of Potomac form a *junction* with that leading to Baltimore, from the Susquehannah. Let us examine this part of the subject more closely, and draw a comparison between the two routes; one pursuing the sinuosities of the river banks, subject to perpetual difficulties, and the other ranging along the side of the rich vallies of Catoctin and Monocacy, through Frederick, down to Washington and Baltimore.

Estimate of the canal to Washington, by the lower or river route.

By the official report transmitted by the Governor, to the Assembly of Maryland, January 1, 1823, the total length of the canal of Potomac to Washington, is stated at 182 miles, which at the estimate made per mile $8676, is	$1.579.032
Upper *route of Canal* to Washington, from Potomac above Harper's Ferry, viz. Williamsport, through Frederick and Montgomery counties to Washington, say 130 miles at $7000 per mile.	910.000
Probable diff. in favor of upper route	$669.032

(I have taken the average cost of canals, such as ours would be, both in size and location, from the data furnished us of the cost of executing various canals in this country, and presume that this is at least as high in comparison, as that affixed to the canal of the river.)

These calculations, (if I have been correct in fixing the point of starting from Potomac, which is not stated in Mr. Kenworthy's abstract, to which I have referred) will tend to prove to the citizens of Washington, how much it would be to their interest, to adopt the upper route; even should the distance be greater, than by the river, which there is no likelihood would be the case; besides the expenses of the work would be less, and the benefits vastly superior, because of the difference in the character (for fertility) of the country it would pass through, and because an intercourse would be thereby opened with the Susquehannah by which a double interest would be gained from the work.

Expenses of the canal to Susquehannah from Baltimore, with the continuation and cost of that from *Potomac* to intersect it. From the diverging point of the Potomac, canal to Washington, (somewhere near Emmetsburg,) to Baltimore, say 55 miles at $7000 per mile	$385.000
From the great basin or feeder (from which branch off the several canals) to the Susquehannah at Yorkhaven, say 50 miles at $7000 per mile	350.000
Cost of canals from Potomac and Susquehannah to Baltimore	735.000
Cost of Potomac canal to Washington	910.000
Total cost of both canals	$1.645.000

Thus we see, that by making choice of the upper route for our canal from Potomac, the expenses of the work will be considerably reduced, to what amount we cannot with certainty determine, until a correct survey be made of the routes; if our data above is correct, this difference of expense will be very great, but as was before observed, we *might* have erred in the point of *beginning* for the canal of the lower route. Yet in any case I am under the impression the result would be in favor of the upper route.

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* *We may form a tolerably correct opinion of the elevation of a country, by noticing the velocity of its streams, with the distance they run; this velocity being always (nearly) in proportion to this slope.*

I have thus endeavoured to point out the superior claims which the plan proposed has to our attention, whether on the ground of economy or utility. Its practicability is inferred not only from the known geological character of the country, where it is proposed to locate this canal, but from personal examination—true—not with an instrument, but with an eye, having a reference to the original object. I will not pretend to point out the *direct line*, which our canal would take, but I am led to think it would, in the general, be not very wide apart of that located in the large map, which I deposited in the Exchange at Baltimore. If then the route under consideration, is of the value represented, should not early measures be taken to explore the country where it is located, and ascertain the practicability of cutting a canal there, together with the expenses of the work, so that we may be able to present a proper and correct view of the subject to the next Legislature, when they shall have different plans of Internal Improvement laid before them, so that they may be able to form a correct judgment which canal they should patronise, as tending most effectually to advance the general interests of the state. I hope these remarks will throw some light on this momentous business, and induce the citizens of Maryland to take an enlarged view of the subject. Should you have a spare column in your useful journal, I will thank you to lay this paper before them.

With sentiments of respect,
Dear Sir, I salute you,
ROBERT MILLS.
Columbia, *S. C. July* 22, 1823.

AGRICULTURE.

Report of an inquiry into the mode of cultivating and treating Flax, in the Netherlands, &c. by Peter Besnard, Esq. Inspector-General for Leinster, Munster, and Connaught.

(Concluded from our last.)

GENERAL OBSERVATIONS.

Whilst viewing the treatment of Flax in the Netherlands, I was not a little surprised at seeing cattle of every kind grazing in the field where it was steeping, and with free access to the steeping pools, the water of which is considered in Ireland to be highly injurious to every animal; having questioned a Boer on this matter, he told me he never knew an instance of cattle being injured by flax-water, nor is any precaution whatever used to keep them from it; on examining the water in which the flax is steeped, I found the color of it to differ much from that of the flax-pools in Ireland: and I am led to think, on further consideration of the subject, that the vegetable matters which are blended with the mud, when spread over the flax, being decomposed into the fermentive process that takes place, mingle with the mucilage of the plant, and act as agents to neutralize its injurious qualities; how *far this may be* the case, or whether the plant, *being ripe* before watering, and totally excluded from light and air in this process, may produce effects different from those in Ireland, I shall not pretend to say; but the fact is as I have described it.

That the mode practised in Holland, Zealand, Flanders and France, of excluding light and air in the steeping of flax, has a powerful effect on the color of the plant, cannot be doubted; and that the properties of the *water* and *mud* employed have considerable influence in that point, as well as on the texture of it, is equally certain, and is fully exemplified in each of those countries, as will be seen by the following statement:

In that part of Holland where flax, the growth of that country and of Zealand, is steeped, and where the soil is dark and of a slimy nature, the water soft and clear, and perfectly suited for culinary and other domestic uses, it is found that it comes from the steeping pool of a dark blay colour, varying only in shades, according to the quality of the soil or mud with which it is covered: but every parcel is uniformly of one color from each pool; it is likewise of a soft and silky nature.

In Zealand, when flax is steeped as in Holland, with respect to the exclusion of the air and light, it is always of an *uniform* color, but from the quality of the water and soil, comes from the pool of a light straw color, and is harder in its nature than that steeped in Holland; this is attributed to the brackishness of the *water* and *soil*, which *purges* the plant in the steeping pools, and deprives it of its extractive matter, so much so, that it is calculated to lose in *steeping in Zealand*, from twenty to twenty five per cent more than when steeped in Holland; for this reason the Dutch flax Boers bring the flax that they *grow in Zealand* from the field, dried with the boles on it, to be steeped, &c. at home, often fifty and sixty miles distant. When flax in *Zealand* is not steeped with the same care as in Holland, by excluding it from the air and light with mud and slime, it comes from the pool *precisely* as it *does* in many parts of the *South* and *West* of Ireland, of *various* colors and *qualities*, even in one *strick* or *bunch*, in consequence of which it *sells* at all *times* in the Rotterdam market at an under price, for inferior work. This is a strong proof of the effects produced by the exclusion of light and air in the steeping process.

In Flanders, where the soil is lighter in quality and color, and the water clearer and fresher than in Holland, the flax is some *shades brighter* than that steeped in Holland, but not of the straw color, or *harsh description* of that steeped in Zealand; it is, however, uniformly of one shade from every steeping pool, doubtless in consequence of the exclusion of light and air.

In France, where the soil is still lighter than in Flanders, the flax is of a lighter color than in that country or Holland, and is between a straw and blay color, neither so hard as the Zealand flax, nor so soft as that steeped in Holland; it is, however, like all the others, when excluded from the light and air, of one color from every pool; nor did I see in the course of my examination of flax in the several countries* I visited, any of that article striped in color, or of different qualities in one head or strick, but *that grown* in a part of *Zealand*, where the cultivation may be said to be in its infancy, as compared to other places.

On the whole, it appears to me, from every information I have received, and from the best consideration I have given the subject, according to my humble judgment, that the exclusion of light and air from the flax in the steeping process, as practised in the Netherlands and France, forms the most important points in the treatment of that plant: and I am of opinion, that a due attention to the mode practised in these countries, would eventually lead to the cultivation of flax in Ireland, on a scale that would be of the greatest importance to the landlords, tenantry, and peasantry of the country.

With respect to the regulations in those countries for dividing the flax into different sorts or numbers, according to its fineness or coarseness, there is no law or public examination, as in Petersburgh and Riga, nor does there seem to be the smallest necessity for such a measure: the flax growers themselves, being sensible of the advantages derived from a regular system, carefully assort each quality before they offer it for sale, and set a price on it accordingly: on this point the merchants are equally particular, as they separate with great care every quality they purchase. In making up for a foreign market, there is no rule as to the size of the bundle or pack; the merchant being governed by the orders of his correspondents, who, for the most part differ in respect to the size of them; some directing them to be made up in bales of one cwt. while others order them in bales of four and six cwt.

Average quantity of Flax and Linseed sold in Holland, from the best information I could obtain, may be about 12,000 tons annually, and 10 000 hogsheads of seed.

HEMP.—The time for *pulling this plant* not having commenced during my stay in the Netherlands, it was impossible for me to obtain by personal inspection, any knowledge of their mode of treating it in the steeping process, &c. I therefore could only examine it in its growing state, and make inquiry as to the general practice of treating it, which I found to be similar to that followed in *most other places*; as to quality, it was excellent in its green state, and promised to be a most productive crop. From the inquiries I made, I learned, that the greatest part of the Hemp grown in the Netherlands is consumed *at home*; but that large quantities of the seed are shipped for various places, from Antwerp.

The following discovery made by Mr. Bander, of Kew, was communicated to me by a gentleman of the first respectability and professional skill in Manchester, who was so kind as to show me specimens of linen taken from the Egyptian Mummies:

"On a recent examination by Mr. Bander, of Kew, of the material which covers the Egyptian Mummies, it was found to be made from flax, some of it plain linen, and some from twisted yarn, similar to sewing thread, varying in the quality of the texture, according (as it is supposed) to the rank of the deceased. In making this discovery, Mr. Bander ascertained that the fibres of the flax plant are cylindrical tubes, the surface presenting a spiral appearance."

The fact of the fibre of flax being a tube, appears to me to elucidate most clearly the cause of the slowness in the fermentive process of the finer plants compared with the coarser,* because an equal portion in circumference of the fine, cantains a greater number of fibres, or cylinders, of more minute dimensions, than the coarse, and do not, therefore, discharge the air and mucilage† so rapidly as the latter, which is composed of considerable quantities of wood, and less fibre than the fine; it likewise demonstrates the necessity for depriving the plant before steeping of the bole or capsule, which may be said to act as a stopper to the fibres or cylinders, and actually seals them at their tops, thereby preventing the necessary discharge until the bole separates from the plant, which it always does with great uncertainty: thus occasioning portions of it to be oversteeped, and other parts not sufficiently done, which causes the variety of colors, and inequality of texture so often found in Irish flax.

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* *In speaking of the qualities of the soil in Holland, Flanders, and France, I allude to those places only, where I have seen flax cultivated.*

* *It is well known to those conversant with the treatment of flax in Ireland, that the fine plant requires more time to steep than the course; it is also known that the top ends are not so well steeped as the other parts. Allowing the capsule to remain on the plant in the steeping process, seems to account for the latter defect.*

† *The mucilage, or, more properly speaking, the resin of flax, is a permanent due, from which a variety of shades of color has been obtained.*

In Russia, and in every part of the Continent, flax is deprived of the bole before steeping, and it is a fact well known, that flax grown in Ireland. generally speaking, is the most irregularly prepared for market of any in Europe, though the soil of the country, is at least equally fertile, and the climate as congenial, as that of Holland, or the provinces on the shores of the Baltic.

The mellowness and evenness of every description of Continental linen, so well known and admired by those acquainted with that manufacture, is considered to arise from the superior quality of the flax of which it is composed, in the preparation of which the greatest pains are taken. Viewing, therefore, the treatment of this valuable plant in the Netherlands, in all its bearings, it seems to me, that the great art (if such it may be called) of producing it of a better quality, and in a more merchantable form, than it is done in Ireland, *rests solely on a well regulated system, from which no person deviates. from the sower of the seed to the Export merchant*;— a practice worthy the imitation of every person concerned in the cultivation of flax in this country.

REMARKS TAKEN FROM DIFFERENT SOURCES, SHOWING THE ADVANTAGES TO BE DERIVED FROM THE CULTIVATION OF FLAX.—In a Treatise, published by the *Dublin Society*, in 1735, it is stated, that an acre of ground in Leinster yielded sixty stone of flax, which, in that day, produced £22 10s. *Sir William Petty*, in his Political Arithmetic, p. 203, speaking of Ireland, says, that forty feet square, or the fifteenth part of an acre, will produce 10s. worth of flax, making the produce of the acre £25. And it appears in a treatise, entitled "*The Interest of Scotland considered*," written by a gentleman of very great knowledge and worth, p. 159, that the lint that was produced from one acre of ground, belonging to a *Flanders Flax Dresser*, in the year 1732, was estimated at £40 value; allowing him £20 for his labor in it, there is a great profit left. The same author says, p. 153, that the produce of an acre *about Cambray*, was frequently about 1000 lbs. weight, which, in the year 1732, *(a scarce one)* sold for 3s. the pound, making the acre worth £150; and he further says, I have known numbers in *Holland*, who, after having paid £16 or more per acre for the flax, have owned that they made £300, £700, and even £1000 per annum, although few contracted for more than 50 acres.—If the *Dutch*, who so well understand trade, follow this practice, we may safely conclude, that they find it most beneficial, and that we should do so, too, if we pursued it with equal assiduity.

Amongst the numerous advantages which the extension of flax cultivation in Ireland presents, that of the manufacture of oil, is one of the greatest importance, not only as adding to our general trade an article of great consumption in the country, but as introducing a species of food for cattle, in certain districts where the want of green food, and of almost every kind of fodder, has often been severely felt, and has in many cases been attended with very ruinous consequences. In the counties of Kerry, Clare and Galway, and the mountainous parts of Cork, Tipperary, &c the loss of cattle, in severe winters and in spring, has frequently been experienced from want of fodder; whilst in Holland, where the winters are more severe, the cattle are fully supplied with that excellent article, Oil cake. The establishment therefore, of small Oil mills, in the vicinity to Scutch mills, and districts where flax is extensively grown, would afford to the mountain proprietors of cattle a cheap and nourishing food, in the worst of seasons, and give to the growers of flax a certain *home market* for all the seed they could spare from their own consumption.

Extract of a letter from Mr. ———, of France, to PETER BESNARD, *Esq. dated London, August 23d*, 1822.

"DEAR SIR,

"In answer to your question respecting the causes of the different appearances of Irish and Dutch flax, I have endeavoured to give you, as follows, the best solution in my power.

"The Irish mode of steeping flax, compared with that used in Holland, is defective in principle, and injurious in the result, to those qualities essential to constitute a good article.

"When flax is steeped in a green state, whilst the plant has not yet attained maturity, it is plain, that all the fibre of which it was susceptible, is not formed, and its constituent principles, being but imperfectly combined are the easier separated; this occasions substantial loss; the carbon, which should go to form the fibre, is, by the process of fermentation, sent off in the shape of Carbonic Acid Gas, which rising to the surface of the water, escapes, and forms that deleterious atmosphere, so fatal to animal existence; again, the flax being partially exposed to the influence of the light becomes variegated, and the decomposition is so rapid and tumultuous, that not only much of the tender plant is destroyed, but the volatile products fly off, and meeting no resistance mix with the air forming a mixture of Sulphurated and Ammoniated Hydrogen, which is but too evident to the olfactory senses of those who come within the sphere of the nauseous and noxious effluvia. The defence set up in favor of this mode, namely, that the younger the plant the finer the tissue, even if true, I doubt would compensate for the actual waste occasioned.

"In Holland, the flax is not put to steep until at perfect maturity, and even then it is covered over in the steep with a thick layer of earth or mud, which, while it defends the flax from the action of the light, furnishes certain affinities, which do not fail to take up, and form with the substance thrown off by the fermentation, insoluble compounds, such as earthy Carbonates, Sulphates, &c. and thus it is, that the tissue suffers less, and maintains its uniform quality and color."

FOR THE AMERICAN FARMER.

REMARKS ON HEDGING,

And the interest of land holders, as it regards various kinds of fencing.

I have several times read in the American Farmer, exhortations to plant timber of the forest kind, to supply the waste that is daily going on in that necessary article, which deserve consideration.

I shall first note a practice which some have adopted, to cut where they have occasion, and clear all off the ground, large and small; it seems at the time of doing it like waste to cut the young and thriving kind, but a few years demonstrates the propriety of the measure, when the second growth begins to progress, as there is then no obstruction, to prevent an equal start of sprouts from the stumps. The various nuts and seeds, too, are encouraged by being open to sun and air. The ground ought to be fenced from cattle and hogs, and the rapidity of the growth is in many instances really astonishing in a few years.

I have timber land that had been taken clean off, say thirty, and from that to forty years back, (before I owned it,) for the sake of timber alone, and grew up even without being enclosed, until as much as the ground could support, was left standing, (the under wood naturally declined.) and now there is a crop of three or four fold the quantity that there is growing on the adjoining land, that was never cleared. This demonstrates the benefit of *wholly* clearing the land, if left for timber again, in preference to *partially* cutting the old, and leaving the young to grow on to keep up the supply.

As *saving timber* is an object in all the old settled districts of the country, the most effectual way of doing so, is the next enquiry. Dr. Franklin published an almanack, when I was quite young, called "Poor Richard's Almanack," amongst other wise sayings, interspersed through it was, "*a penny saved, is a penny earned*," this saying no doubt helped to make many a wealthy man—it made *some misers* out of contracted minds; but, nevertheless, the saying was good advice, and the maxim ought never to be forgotten—and as it will apply to the case of timber, it should always be kept in view by the land owner. That being the case, I shall call the attention to the destructive waste, made by such a large portion of it, being every year consumed in fencing—a circumstance, that because it is customary, is not regarded—nay, is even considered necessary, when the following will shew the contrary, as matter of fact—*(no visionary scheme.)*

In the first place, I feel it an incumbent duty, to answer the fallacy of arguments that have been admitted into the Farmer, and coming from an *Agricultural Society*. An address or essay on fences was written by James Worth, and read before the Agricultural Society of Buck's County, November 1820, and ordered to be published in the National Recorder, from whence it got into the Farmer, August 10th, 1821, at which time I remarked it, as I had previously wrote some sketches of my experiments and observations on hedging and hedges, and that experience has increased the stock of knowledge on that head sufficiently for the disclosure of further useful information, as hedging is rapidly progressing in my neighborhood, and with the desired success.

J. W. in his essay, speaking of *trees*, instead of posts for wire fence, exhausting the soil, says.—"Thus it is with hedges, they seem to be cheap "in the first instance, but the exhausting the soil "alone would in my opinion render them a dear "gift, nor do I believe they will be so durable as "has been imagined, for I am told a grub has attacked one species of the thorn, and I have often seen sassafras, cherry, and other trees, "with abundance of grass, growing along *hedge* "*rows*, which will assuredly bring on a decline, "in the course of a few years; besides I have "never seen a hedge, that was proof against "hogs; I admit they might be kept in better order, but it will be expensive, and will require "more attention than our farmers are willing to "bestow; upon the whole, I am surprised that "this species of fencing should have been produced amongst us in the present state of our country, and can attribute it to the prejudice of foreigners who have been accustomed to it from "necessity."

I shall take the objections as given, and give matters of fact in reply to them.

Objection 1—Exhaustion of soil.
do. 2—Want of durability.
do. 3—Not hog tight.
do. 4—Expensive.

Answer 1st. As the objection appears to more particularly belong to a "*hedge row*," as by the description it was truly named a hedge row, this is a point that ought to be better understood, than it generally is, see Vol. 3, page 117 of the American Farmer, a definition of a *hedge row*, and a *hedge proper*. There can be no doubt of the former, composed of an assemblage of forest trees combined with a variety of other products, of spontaneous growth, having the same effect, that the borders of a forest would have on the soil adjoining. But I presume the essayest nor the Society either, had ever seen a *hedge proper*; my presumption is founded on the ground that they are not common, nor are they in any way mentioned by them—further, many experienced farmers have, on viewing a hedge in its proper trim, declared the want *of a conception of the thing in reality*, before occular demonstration furnished the idea.

Therefore I draw the inference, that to condemn thus publickly, so important an improvement in husbandry, was premature in either an individual or society, before they were acquainted with the subject matter.—2d, as to their durability see Vol. 3d, page 118, (my own knowledge of their duration, without any marks of decay, has extended to half a century.)

3d. The objection to their not stopping of hogs, is in part removed, by admitting the want of being "kept in better order," yet this only as it concerns a hedge row, not a plashed hedge; my plashed hedge the first year 1812, caused the rabbits to cut holes through the bank under the hedge to get a ready passage to their pasture ground.

4th. The expense alluded to, as a frightful thing, is all visionary—I made no calculation when I began the experiment, because I was determined to have a trial at any cost, and was really astonished, when I made the calculation, for the publication, which see in Vol. 1st, pages 350, 403, where the expense will be found to be two-thirds less than a post and rail fence. It will be seen in divers places in those sketches, that a hedge will make a sufficient fence, when plashed, at seven years old, that ought *never to be forgotten*; if *taken proper care of*, agreeably to the sketches already published in the American Farmer.

One part of the Buck's County publication, recommends planting chesnut and locust timber for fencing, and after *twenty years*, to begin to cut; when it may be observed that three thorn hedges may be raised and matured in succession, while the timber is *growing* to make a *perishable* fence.

The latter project is all founded on theory—the former,—living fences, are founded on fact, and since they have been brought into notice, are becoming almost daily visited, and of course more extensively known. J. W. expresses a surprise, that hedging should have been introduced in the present state of the country, and attributes it to the prejudice of foreigners, and they being accustomed to it from *necessity*—does he not admit *necessity* to reign here, as a spur to doing of something, or why recommend planting chesnut and locust timber for fencing?—timber we know to be diminishing in many of the most populous parts of the country, and called into aid in every building that is raised either in town or country—why then continue in the practice of dooming so large a portion, to certain destruction in fencing? Neither can a vessel of any kind be put under sail, for our needful commerce, nor a hearth warmed, or a meal of victuals cooked, without the aid of timber, (except in our coal districts,) and after all those considerations, how should it remain a doubt about the adoption of living and durable, I might say everlasting fences!! As to the material, it has been shewn that the thorn, so unfit for any other of those purposes, is so well adapted to *fencing*, that I have been struck with awful astonishment, when I have discovered its propensities to serve our purpose; for when we have mismanaged it in training, we may cut it away and destroy what is above ground, and the great author of nature has placed that property in it, to subserve our purposes, that it will put forth another top to the same root, to exercise our skill again, and so on, ad infinitum. It is a shrub, and never soars out of our reach. It is armed with defensive armour, as must strike every beholder, *this is for some useful purpose*, and although that is the case, it may be made usefully ornamental to a farm, and in fact has become so, to the honor and credit of some of our small farms, which though deficient in other respects, lessen not the value of this improvement.

Let them who may not be fully satisfied with my statements, view for themselves.

CALEB KIRK.

Brandywine, 4*th of* 8 *month*, 1823.

(To be continued.)

TO THE EDITOR OF THE AMERICAN FARMER.

ON THE MANAGEMENT OF CALVES.

Mr. Skinner,

I was much gratified by perusing in your seventeenth number, (Vol. 5,) an article on the subject of rearing calves, by "an Agriculturist of Delaware," for in my opinion there are in general, few objects on a farm more neglected, and none that deserve or require more attention; and having had some experience, and taken much pleasure in attending to them, I am induced to offer a few remarks, and hope they may prove acceptable to your readers.

It is a practice with too many, to turn calves, when only a few days old, into what is called the "calf lot," and suffered only to approach the mother twice a day for a few weeks, and even then, after half her milk has been taken from her—others permit the calves to run with their mothers for several weeks, and sometimes months, before they attempt to wean them, the consequence of such treatment is, they are never effectually weaned, but continue to suck the mother whenever they can approach her, and if in separate, although adjoining pastures, will put their heads through a fence, and the mother afford every facility to gratify her offspring; both these customs are bad, and ought to be discountenanced upon all occasions.

The most proper way of rearing calves is, to wean them at about eight days old, to keep them constantly in the stable, and teach them to drink out of a bucket, which is easily accomplished, by putting new milk into a basin, and letting them suck your fingers with the hand immersed into the milk, and in a few days, withdrawing the fingers gradually from the mouth, afterwards giving as much new milk as they can drink, for five or six weeks, when they will begin to eat a little grass or clover, which can be pulled and given in small quantities twice a day, and when they eat freely, you may mix a little water with the milk; or at eight or ten weeks old, give sweet skimmed milk, slightly warmed, which soon after dilute with water and add a little meal; should milk be wanted for other purposes, give flax seed tea, which commence by mixing with milk slightly warmed; indeed by keeping calves constantly in the house, you may induce them to eat almost any kind of nutritious food; they also become perfectly docile, have fine round bodies, with clean smooth hair, and a sprightly look, but if turned out into a field, they are tormented by flies and heat, never in good condition the first year, but remarkable for pot bellies, rough hair, heavy look, and ugly flat sides; indeed the contrast in appearance is so great, that I think laziness alone would induce any one to turn their calves into a field the first summer. If change of food produces either costiveness or looseness give about half a pint of Spermaceti oil, to be repeated if found necessary; it will prove a cure and can easily be given out of a black bottle; it is also good for cows, that are drooping or unwell, adding of course to the above quantity.

Calves intended for the butcher, ought always to be tied up in a stable, and if kept in darkness so much better, as they will be less disturbed by flies, and will sleep more than if constantly in the light; the mother ought to be turned in twice or thrice a day, and the calf permitted to suck as much as it wants, never taking any milk from the mother until it is satisfied; if every farmer would thus manage, we should see less poor veal than is now exhibited in our market.

On the subject of cows having calves too early, no excuse can be offered and none ought to be admitted; yet how frequently are we told, that by accident or the negligence of an overseer, a young cow had a calf at 15 or 16 months old, whereas in my opinion, the blame ought to rest on the indolence or carelessness of the master, who should himself see that his fences are good, and the young heifers well secured by themselves, and the male and female calves separated at four months old, but in order to guard effectually against such *accidents*, the bull should never be suffered to go at large with other cattle, but be kept in a small lot, having a shed in it, and well secured with a strong post and rail fence, with a gate to be kept locked; here you may feed him, when and how you please, and turn in as occasion requires such cows only as you desire; this method would also make him less vicious than if going at large, and effectually prevent his becoming mischievous.

Although I recommend the keeping of calves housed the first summer, it is not the less necessary to be observed during winter; and I will here ask those of a contrary opinion, what benefit is derived from any description of cattle going at large in winter? do they obtain any food by rambling about in the wet and cold? no, on the contrary, any thing which they do pick up is dead, and more or less indigestible, whereas, in the house they would at least be kept dry and warm, and unless owned by an idle and niggardly farmer, would have something in the racks to nourish them; by keeping them housed you also preserve all their dung, which ought of itself, (if none more important was the result,) to be a sufficient inducement; indeed whenever I see cattle roaming at large in winter, "thinks I to myself," there lives a lazy, and consequently, a bad farmer.

NORTH DEVON.

Baltimore county, *Aug.* 1, 1823.

(From Memoirs of the Board of Agriculture of the state of New York.)

ON THE MANAGEMENT OF SHEEP.

By the President of the Agricultural Society of Steuben County, to the New York Board of Agriculture.

I am very much pleased with the prospect of another agricultural volume, and wish to contribute to it whatever lies in my power. Having turned my attention for a few years past, to the raising of sheep, I think my experience has enabled me to make some observations, which may be of service to my brother farmers.

There are two subjects, connected with the raising of sheep, to which I beg leave to direct your attention. The one is, the most proper time of the year to turn the bucks into the flock—the other is, the shearing of lambs. On the former subject my practice differs from most farmers. I am an advocate for raising early lambs. The practice of keeping the bucks away till the fore part of November, I believe pernicious, and one cause why so many flocks degenerate. It is unnatural. Providence has pointed out the best season for animals to breed; at that time the females are in season, and I do not believe we shall gain any thing by altering the course of nature. We suffer every other animal to take its own course. My arguments in favor of the practice of suffering the bucks to lie with the flock during the whole season, are the following:—When the bucks are turned into a flock late in the season, so many of the ewes are in season at the same time, that the offspring are feeble. The cold winds and frequent storms of the spring, together with the difficulty of keeping sheep confined at that time of the year, I have found more destructive to lambs than the cold nights of winter. It is also more difficult to keep late lambs over the next winter. Early lambs are also more apt to have lambs the first year. My practice is to keep my sheep sheltered from rain by open sheds, and shut up the sheep and lambs about one week in a warm stable; and when they are a month old they will eat hay with the flock. But the sheep must be continually kept up with corn and succulent vegetables, or they will neither give milk for their lambs or bear fine wool.

There is one more benefit which arises from the practice of raising early lambs, which is, the opportunity it gives for shearing them in the summer.

I have had two year's experience in that practice, and am much pleased with it. My wool averaged, when washed perfectly clean, twenty ounces to the lamb, and sold for fifty cents a pound. The fleeces of the yearlings, having been well washed on the sheep's back, averaged about two pounds and a half. The wool was the best I ever sheared. It was of short staple, but even, and exceedingly fine and soft. It is well known to the growers of fine wool, that the fleeces of yearling sheep are not good, because the outer ends of the wool are coarse and dead. Hence it is necessary to clip such fleeces, before they can be manufactured into fine cloth. This evil is wholly remedied by shearing the lambs.

The time for shearing lambs is generally supposed to be about the first of August; but if lambs are allowed to fall in the winter, I think that almost a month too late. They ought to be sheared as early as possible, that the succeeding fleece may have more time to grow, and that the lamb may be eased of his "cumbrous load," before the hot weather is in a measure past.

I submit these remarks with diffidence, as I am not much accustomed to writing; and especially as my ideas, in one particular, differ from those of most of my brethren in the profession.

From page 165, vol. 2.

HOPS.

Further information on the curing of Hops—procured at the request of the Editor of the American Farmer.

Beverly, 4th July, 1823.

Gorham Parsons, Esq.

Dear Sir—I did not keep a copy of the letter I wrote you respecting the culture and curing of hops, and I do not recollect particularly the further information you requested of me, but I believe it was principally respecting the kiln.

A kiln for the purpose of drying hops should be at the side of a hill or rising ground, so that the top should be about nine feet from the bottom, twelve feet square at the top, tapering on all sides to about three and a half feet at the bottom *in the clear*, built up tapering, with stone laid in lime mortar, and plastered with clay from top to bottom, with an aperture at the bottom, about the size of the mouth of a common oven, for the convenience of putting in the coal, firing it, and regulating it afterwards.

Upon the stones at the top, is placed a cill of four pieces of timber of about eight inches square, and of course about twelve feet long, that being the size of the kiln at the top, upon which you place strips of boards, half inch thick and two inches wide, and within three and a half to four inches of each other, over which you stretch tow or coarse linen cloth, for a bed to place the hops upon, for the purpose of drying, and under which, at the bottom of the kiln, is made a charcoal fire, regulated at the discretion of the man who attends the drying. It will of course be necessary to have a board round the kiln at the top, of about one foot high, to confine the hops on the bed. I think it would be a further improvement to have a covered roof, and open at the sides, to protect the hops in case of rain, while they are drying.

It will be necessary to stir them constantly with a rake, while they are drying, and you may with convenience dry about fifty pound each time. I believe you may calculate about one pound to a hill, or 800 lbs. to the acre, for the second and third year, after planting, if the land is in good order. It will be well to renew your fields once in three or four years, because the vine degenerates.

I am, Dear Sir, with great respect,
Your friend and obedient servant,
ISRAEL THORNDIKE.

TO THE EDITOR OF THE AMERICAN FARMER.

THE PEACH TREE;

How can we prolong its life, and promote the soundness of the fruit?

Sir,

I wish information through the medium of your paper, of the best method of raising that most valuable fruit, the peach, with a view to the greater, than usual, durability of the tree. I have tried nearly all the common methods in use, for preserving peach trees, and have always failed of success. The trunk is so universally liable to the attacks of the worm, that it seems necessary we should resort to some other stocks on which to engraft or inoculate the peach. I have tried the plum, but have never yet had any fruit, not having tried it long enough; but have my doubts whether I shall succeed, as the trees look very sickly.

An idea has struck me as being likely to answer, but never having heard of its being tried, and the budding season near at hand, I concluded to make the inquiry, that if any of your readers have tried it, they may make the result known, so that if favorable, others may have the benefit—if otherwise, we may all be saved the trouble of trying it.

It is well known that the peach flourishes as well upon the apricot as upon stocks of its own kind; but the apricot is liable to the same attacks by the worm, and therefore not durable.—But as the apricot flourishes remarkably well upon the plum, and the peach upon the apricot, could they not be so engrafted or inoculated upon one another as to answer our purpose?—First, graft or inoculate the apricot upon the plum, and a year or two after, graft or inoculate the peach upon that apricot: we should then have a plum stock for our apricot, and an apricot stock for the peach.

A PENNSYLVANIAN.

FOR THE AMERICAN FARMER.

WATERING HIGH LANDS,

Especially with muddy Salt Water—easily done, and very useful.

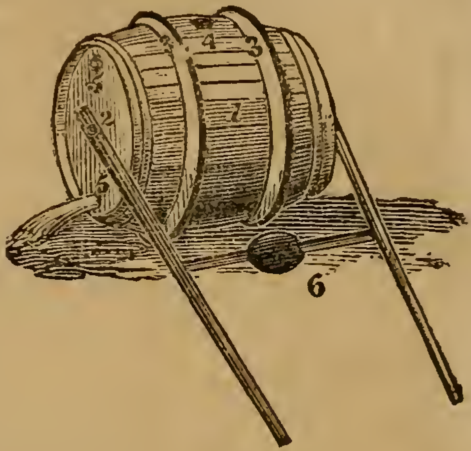
Charleston, S. C. July 9, 1823.

Dear Sir,

I inclose you a draft of a machine for watering high lands with salt water. It was handed to me a few days ago, and I intend presenting it to our Agricultural Society, which meets on Tuesday next. In my conversations with gentlemen living near the salt water, I have always recommended the use of watering carts, and it is well established that marsh mud as manure, has answered equal to expectation, and is now in general use among the cotton and corn planters. The present machine is certainly more simple and less expensive than a watering cart, and will answer the same purpose. I have copied it as well as I could, to represent the intention, and beg you will make what use you please of it.

Before I conclude, permit me merely to mention, that I have a small quantity of the Isle of France cotton, growing very luxuriantly—it is yet in blossom. I remain respectfully,

CHARLES E. ROWAND.



No. 1. The Cask.
2. The Axle.
3. Felloes.
No. 4. Bung.
5. Plug holes at both ends.
6 Seat for the boy.

THE IRRIGATOR.

This machine is calculated to water meadow grounds, cotton and provision land, and with a boy and horse, ought to water one or two acres per day, according to the distance of the river from the field. The cask should contain 120 gallons. 1800 gallons of salt water are equal to eight bushels of salt; salt is one of the best manures; eight bushels of salt would cost $5 60 cents, and eight bushels is said to be sufficient for an acre, at one time. The expense of putting 1800 gallons of salt water on one acre of land with this machine would not exceed 75 cents. A cheaper manure or a better, cannot be had. The felloes ought to be eight or ten inches wide and have 4 inches tread. The axle should be square, until it passes through the heads of the cask, afterwards round, to receive the shafts. Traces may be used to go on the axles for the convenience of turning out of one alley into another, to prevent injury to the cotton or corn bed. Four of these machines would in five days water twenty acres of land, which in dry seasons might be thus prepared for potatoes or slips, without being obliged to wait for rain, besides the advantage of the salt and muddy manure. The cost of the whole machine would be a mere trifle. The planters on the salts need not cultivate poor or exhausted lands, for salt water made very muddy is a most excellent manure. Plug holes must be made at each head, that the water may be always running as the cask revolves.

☞ Were this hogshead suspended and moved on a pair of low wheels, the draft would undoubtedly be much easier—and were the contents to pass in the first instance, into a box perforated in the bottom with small augur holes, the distribution over the land would be more regular. At Orange Farm, where there are kept more than 100 cows, the liquid portion of the manure is collected by drains into a cistern, in the centre of the barn yard. It is there pumped up, taken out and distributed in the manner here described.

Edit. Am. Far.

FROM THE NEW-HAMPSHIRE STATESMAN.

CIDER.

Our farmers are beginning to feel an interest in the manufacture of cider, since they have ascertained that its value in the market can be increased *tenfold* by increased attention; and that the flavour of it can be made to rival many imported wines.

We have obtained permission to publish, for the information of all who duly appreciate the importance of the healthy liquor, the following remarks concerning it, communicated to Governor Woodbury, by the society of Friends at Canterbury.

CANTERBURY, June 9th, 1823.

To His Excellency Levi Woodbury.

"Justly esteemed and much respected friend—The process of making and refining cider, in order to have it good, is so simple, (though important,) that many people entirely overlook it, supposing the mystery so deep as to be entirely out of their reach; and others, tenacious of the customs of their forefathers, shut their eyes and ears to any improvement, however propitious to their interest and comfort. Such will probably be contented with their ill-flavored and unwholsome beverage during life. Should we exhibit what we know with regard to the management of cider, some people would laugh and say, we do all that and a great deal more—and probably they do, and add many more ingredients, such as water, pomace and rotted fruit; and perhaps something more from fowls, beasts, and vermin; none of which make the cider any better. However, we shall not hesitate to give it as our decided opinion, that Northern or cool climates are much more favorable to cider than those which are more southern or warm; though what greatly contributes to the goodness and delicacy of cider is the cleanliness of the casks which contain it. In fine, all the utensils employed in making cider should be kept clean, and not suffered to get sour through the whole process: even the press should be frequently rinsed down during the time of making cider in order to prevent sourness or a change in the cider.

To clean casks which have been used for cider, we take them from the cellar as soon as convenient after the cider is out, (reserving the lees for stilling) and rinse each clean, first with a pailful of scalding water, then with cold, leaving the casks with the bungs down till dry; then we bung them tight and return them to the cellar; or some other convenient place (not too dry) for their reception. Previous to filling these casks with cider the ensuing season, we scald and rinse them again as above.

Apples that drop early, we make into cider for stilling, it being unfit for table use; the spirit of which, together with that of the lees, we return back to our store cider at the time of racking, which is generally about the 1st of January.

Cider made of apples before they are fully ripe, we deem unfit for drinking; and even when ripe, if they are made into cider during warm weather, so as to produce a sudden and rapid fermentation, it will unavoidably be hard and unpleasant.

The fact is, the slower cider is in fermenting, the better it will be at any age; consequently the later in the season it is made, and the cooler the weather, (if the business can be conveniently performed) the better, especially for long keeping.

About the 1st of November, we think a suitable season, if the weather be dry, to gather, and put under cover, apples for store cider. After lying in this situation till mellow, (not rotten) we commence grinding. The cider trough should be large enough to contain a whole cheese, in order to admit the pomace (if the weather be cool) to lie over one night before pressing. This method contributes much to the color and goodness of the cider. In the morning, press it out gradually and put it up into the casks through straw or rather a sieve fitted and placed within the tunnel to stop the pomace; after which we convey it immediately to a cool cellar, leaving out the bungs till the fermentation chiefly subsides, which may be ascertained by the froth settling back at the bunghole. We then drive in the bungs tight, leaving a small spigot vent a while longer, if need require to check the pressure; but which must finally be made air tight.

About the first of January we rack it off free from the lees into clean casks; those that have been used for spirit are to be preferred: Otherwise, having drawn off one cask, we turn out the lees, scald and rinse as before mentioned, put in three or four pailfulls of cider; then burn in the cask a match of brimstone attached to a hooked wire fixed in the end of a long tapering bung, fitting any bunghole. When the match is burnt out, take off the remnant, apply the bung again and shake the cask in order to impregnate the cider with the fume. Put in more cider and then another match, add from one to three gallons of spirit (obtain from the lees and windfalls as above) to one hogshead; fill up the cask with cider, and bung it down air-tight and let it remain till it becomes of mature age, which will require at least two years. Cider managed in this way, we presume, will keep pleasant for ten years, and perhaps for twenty, though we have never kept it over six, being necessitated to make a premature use of it in scarce seasons.

We would not be understood by any means to suggest a notion that good cider, cannot be obtained without the addition of spirit, but the contrary, especially that which is intended for use within one or two years; yet spirit gives it a permanent body and will insure its preservation if the above directions are strictly attended to."

Editorial Correspondence.

PROLIFICK MELONS.

DEAR SIR,

I send you below a piece of information, just as I received it, after having observed the fact of the difference in form, at the blossom end of different melons, as stated. There are many of these notions that are developments of the real secrets of nature.

T. T.

The best seed is of the greatest importance in raising every thing. It is not generally known, but it is said to be perfectly understood in Jersey, where they raise most uncommonly abundant crops, that there is a male and female water melon. And that seed ought to be saved, not only from the female melon, but from the half that grows uppermost, or next the sun. The male melon is said to be formed full out—the female to have a small indenture, or depression at the blossom end, in which you may lay the ball of your finger.

A. B.

Extract from Pennsylvania.

"You have given a long account of the mode of making ponds. We generally find it cheaper to sink a pump in the field, and fill a trough once in 24 hours, than in any other way to obtain water. A well with a simple wind-mill has in this state, perfectly effected the object."

Gleanings from Foreign Journals.

FAT SHEEP.

On the 13th of May last was killed at Stow fair, Gloucestershire, by Mr. Marshall, a wether sheep, bred and fed by Mr. Large, of Broadwell, in the county of Oxford, which weighed 66½ lbs. per quarter; and on the morrow, the 14th of May, was exhibited alive at Stratford on Avon fair, Warwickshire, before many hundreds of the first breeders of sheep, and afterwards killed and shewn dead by Mr. Tasker—another fat sheep, which was also bred and fed by Mr. Large, which weighed 68½ lbs. per quarter, and was allowed by all who saw him to surpass any sheep ever before seen for symmetry and size. Mr. Large begs to inform his friends that his RAMS will be open for inspection and letting, any time after the 30th instant.

ON PRESERVING POTATOES.

Lee Hall, Worcestershire, March 29, 1822.

SIR,

It is not at all surprising, from the present low price of farming produce, that inquiry should be made respecting the best mode of employing it at home, instead of taking it to market; and amongst your numerous correspondents is "*W. G.*," who, in a letter dated from Bromyard (which is situated in the midst of the cider and hop plantations,) is making inquiry after the best construction of a kiln for baking potatoes. It is not in my power to give him any information upon that subject; but I beg leave to recommend to him the following process for the management of the potato, which I have no doubt will preserve all the nutricious parts of this valuable root for years, and if now put in practice, may be the means of preserving much food for man and beast. The process is as follows: Let the potatoes be *particularly* well washed, then put into the cider mill, and ground to a perfect pulp: put this pulp under a powerful press (in hair cloths, as in cider making), and press it as dry as possible: then take it from the press, and put it upon the hop kiln, and carefully and well dry it; and then let it be packed in casks, or kept in any other manner, so that it be always preserved in a completely dry state. If this simple process is carefully conducted, I have no doubt the potatoes may be preserved for years.

"*W. G.*" may try the experiment with the greatest facility, as cider mills and hop-kilns (if he has none of his own) are upon every farm in his neighbourhood, and at this season of the year not in use. Should he be induced to try the experiment, I hope he will have the goodness to give the result to the public by means of your journal.

I am, Sir,
Your's, &c.
JOHN BLOUNT.

ON FEEDING EWES WITH MANGEL WURZEL.

Herefordshire, Dec. 12, 1821.

SIR,

As I consider it to be the duty of every individual connected with the agricultural interest, to communicate to the public the result of satisfactory and beneficial experiments, I will briefly answer the several queries of "*M. W.*" in your Journal of this week.

From the principal part of my turnip crop failing in the year 1820, I was compelled to feed my stock on my crop of mangel wurzel; the ewes, before lambing, were taken off the few turnips I had, and put into the fold, where they were fed with mangel wurzel, and a very small quantity of hay, *and without water.* After lambing, they were given the same food, and from the great flow of milk produced, the lambs were in very high condition. The whole of my flock were kept entirely on this food, from the beginning of January 1821, to the end of March; during which period I weighed eight wether sheep, and put them into a barn, when they were given twenty-five pounds of mangel wurzel, and about five pounds of good hay for each sheep every twenty-four hours, for five successive weeks; some of them gained more than others: but on weighing them out, at the expiration of that time, they had increased, upon an average, eight pounds per quarter. I can also state that, having killed several of the sheep, the mutton was particularly mild and sweet. I am fully persuaded that there never was better food for sheep, or food that will create so great a flow of milk from the ewes. If you consider this a sufficiently minute reply to the queries of your correspondent, I think the sooner it is made known, through the medium of your valuable journal, the more satisfactory it will be to "*M. W.*"

I remain your well-wisher, P.

P. S.—It is necessary to observe, that the mangel wurzel must be carefully cleaned, without washing, and given whole.

ETYMOLOGY OF RYEGRASS.

Mr. Whitworth having offered some remarks on this subject, we beg to subjoin a few general observations. The word *Lolium*, is used by the ancients for *cockle or tares*, two plants, though very unlike, yet both reckoned equally injurious to corn in those times. So Dr. Thornton derives the word *Lolium* from two Greek words, signifying *corn* and *injury*. Modern writers have applied the term *darnel* to the genus *Lolium*, contemplating the species *temulentum*, as before mentioned, because it was *an injury to the bread in which it might be mixed*, and consequently to the growing crop, or rather to the sale of the corn in which it appeared. All this appears very satisfactory, although it is unfortunate that *darnel* should be applied as above, it being with us a different plant; but these particulars, together with the French word, and the rest mentioned by Mr. W. have nothing to do with the origin of the name *Ryegrass.*

It appears that the term Ryegrass, was originally applied to the *hordeum murinum*, or *wall barley grass* mentioned before; and that something of a dispute or misunderstanding had taken place about the plant at first designated by this term, even at the very outset of its cultivation. Thus Mr. Mills, at p. 351 of the 3d volume of his *Complete System*:—"The *wall barley* or *way bennet*, as some people improperly term it, is *evidently, from the shape of its ear*, and from every other characteristic circumstance, a *ryegrass* or *wild rye*, as Mr. Ray observes, [Hist. Plant. p. 1258, and Synops. p. 391.]" Here is Mr. Ray himself introduced, talking of Ryegrass, which word it now appears, arose from the resemblance of certain spikes to *rye*; and however much the plant was mistaken, and the term transferred to a grass whose spike does not resemble *rye* at all, yet the etymology will by no means allow us to substitute *ray.* It is quite another thing as far as custom may hereafter sanction the introduction of *Russell-grass*, as applied to an improved sort; because every one is at liberty to give a new name to the thing which he originates; and it is in some measure his *duty* to distinguish it from other particulars of like kind. This does not suppose that *Russell-grass* will be received in Botany as the common name of *Lolium* (although it is improper that *Darnel* should be used there,) neither is *ryegrass* the common botanical name of the *genus*, but only applied to a certain sort in agriculture, by mistake, by custom, and by imitation, and the neglect or ignorance of the early writers on this subject. Finally, it is desirable that as far as we can get rid of the old sort of this grass, we should get rid also of a name so misapplied and improper as *ryegrass*: whether these desirable particulars will hereafter proceed together remains to be proved by time, and will be decided without any reference either to Mr. Whitworth's opinion or ours.

QUERIES ON THE PRINCIPLES OF FERTILITY.

Eastwood, Nov. 30, 1821.

Sir—As this is a time of general distress amongst farmers, having much to contend with, and many enemies, they ought to be as closely united, and feel as great a sympathy for each other, as the members of their own bodies; and if one knows any thing which would benefit the rest, and neglects to communicate it, I conceive he is criminal.

Farmers are very much divided in opinion on essential points of managing land of the same quality. For instance, some think manure made from vegetables ought to be well covered, and that it has a tendency to *rise:* others prefer it on the surface, and suppose it will sink into the soil. Some think exposing the land to the sun exhausts its fertility; others say, the oftener land is turned over by the plough, and *exposed to the sun*, the better. Some contend land is benefitted by deep ploughing from Michaelmas to Lady-day; others, for shallow ploughing at all times,—and some for working with scarifiers, and never ploughing. Now, as light and darkness scarcely differ more than these opinions, surely something may be done by you, or some of your correspondents, to point out the errors, and if only one be benefitted, it will be worth the attempt.

If you have no objection, I shall be glad to ask the following questions:—

Ought manure (intended to be useful to more than one crop) to be well covered, or left on or so near the surface, that a considerable quantity may be brought up, when harrowing in corn or turnips?

Does exposure to the sun, by frequent ploughing in summer, benefit, or injure, the land?

What are the benefits land derives from summer fallow? What quantity of land is supposed to be summer fallowed in England annually, and the expense of rent, rates, taxes, and labour per acre?

Can any crop be grown, and the land be equally benefitted, and as fit for the same course of crops afterwards, as if summer fallowed?

I am, Sir, your obedient servant,
THOS. WRIGHT.

☞ We shall take an early opportunity of replying to these queries generally; in the mean time any hints from our correspondents will be thankfully received.—*Edit. Far. Jour.*

*Answer to our Correspondent on the cost of the Preparation for dressing Harness.**—We have made due enquiries as to the cost of the mixture recommended in our Journal, No. 727, and find it to be nearly as follows:—Neatsfoot oil, 1s. per pint; spirit of tar, 3d. per ounce; Bees wax, 2d. per ounce; naphtha, 1s. per ounce; (this ingredient not necessary for common purposes). Then dissolve two ounces of wax (with gentle heat,) in four ounces of spirits of tar, and add this quantity to two quarts of oil, and the price is about 2s. 2d. per quart. The whole should be incorporated with gentle heat, leaving out the naphtha.

The Duke d'Angouleme's character is become a subject of humour in the Saloons of Paris. The following is ingeniously imagined, and neatly expressed:—

Intrepid a l'eglise, et pieux au combat,
  D'Angouleme se fait paraitre;
"C'est un saint," dit le soldat;
  "C'est un heros," dit le prêtre.

IMITATION.

So brave in prayer—devout in fight,
  See Angouleme appear, O;
The soldier cries—"*Behold a Saint!!*"
  The priest exclaims—"*a Hero!!*"

CONVERSATION.

[The following lively description, although from the pen of an author so well known as Cowper, presents such a faithful picture that we do not hesitate to extract it, in hopes of its attracting the attention of all such convalescents and invalids as are justly complained of.]

Some men employ their health, an ugly trick,
In making known how oft they have been sick,
And gives us in recital of disease,
A doctor's trouble, but without the fees;
Relate how many weeks they kept their bed,
How an emetic or cathartic sped;
Nothing is slightly touched, much less forgot,
Nose, ears, and eyes seem present on the spot.
Now the distemper, spite of draught or pill,
Victorious seemed, and now the doctor's skill;
And now—alas for unforeseen mishaps!
They put on a damp nightcap and relapse;
They thought they must have died, they were
  so bad;
Their peevish hearers almost wish they had.

Estimate of mortality.—According to a statistical chart published in a Neapolitan Journal, the population of the globe is 632 millions. It estimates by approximation that there occur,

	Yearly.	*Daily.*	*Hourly*	*Minute.*	*Second.*
Births,	23,407,407	64,130	2,672	148	8
Deaths	18,588,235	50,927	2,122	135	7

The following is given in the *Asiatic Journal:* Lieut. Collet, of the Bombay army, having heard that a very large tiger had destroyed seven inhabitants of an adjacent village, resolved, with another officer, to attempt the destruction of the monster. Having ordered seven elephants, they went in quest of the animal, which they found sleeping beneath a bush. Roused by the noise of the elephants, he made a furious charge on them, and Lieut. C.'s elephant received him on her shoulder, the other six having turned about and run off, notwithstanding the exertions of the riders. The elephant shook off the tiger, and Lieut. Collet having fired two balls at him he fell, but again recovering himself, he made a spring at Lieut. Collet. Having missed his object, he seized the elephant by her hind leg, and having received a kick from her, and another ball, he let go his hold, and fell a second time. Supposing that he was now disabled, Lieut. C. very rashly dismounted, with the resolution of killing him with his pistols; but the tiger, who had only been crouching to take another spring, flew on Lieut. C., and caught him [illegible] mouth. The strength and intrepidity of the [illegible] not for[illegible] him; he immediately fired his pistol into the tiger's body, and finding that this had no effect, he disengaged his arm with all his force, and directing the other pistol to his heart, he at last destroyed him, after receiving twenty-five severe wounds.

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* See *American Farmer, No.* 22, *vol.* 4, *p.* 167.

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 22, 1823.

VERY BEAUTIFUL SEED WHEAT.

Within the last week, some hundred bushels of white wheat, sent to this market by Tench Tilghman, Esq. of Talbot county, have been sold for seed wheat to southern farmers, at $1 65 per bushel; being about forty-five cents over the price of common white wheat—but twenty-five cènts only above what the same wheat would have brought from the millers, one of whom offered $1 40 for one thousand bushels.—This extra price is certainly nothing beyond a fair remuneration for the extraordinary pains which has been taken by Mr. Tilghman for a series of years, to give to his wheat a pure and uniform character, in which he has eminently succeeded—for assuredly, judging from the sample left with us, we have never seen any so remarkable for its thorough cleanness and total freedom not only from all filth and offal, but from wheat of any other species. Those who have curiosity to see the *justly celebrated white wheat of the Eastern Shore of Maryland*, in its perfection, may be gratified by calling at the office of the American Farmer.—Such specimens and such success, ought to gratify the eye and stimulate the pride of all good farmers—young and old.

More of this wheat may be had on application to William Cook, Esq., Light-street wharf.

A NEW WHEAT.—In the Editor's absence, a bunch of very fine looking wheat, in the straw, was left by Mr. W. D. Mercer of Sassafras neck, Cœcil County. It is remarkable for the stoutness of the straw, and the broadness of the blade, and is said to be much less liable than other wheat to lodge—the head is uncommonly large, but the stalks left being pulled when green, to prevent shattering, the grain is not a fair sample—we understand it to have been originally brought from Pennsylvania to Cœcil County, where it has acquired a very high character, for its beautiful appearance in the field, and *great yield to the acre*—some hundred bushels will be deposited about the middle of September, for sale with Messrs. Wilmer & Palmer of this city, to whom application may be made by those wishing to engage some of it for seed.

PRICES CURRENT.—CORRECTED WEEKLY.

Flour, best white wheat, $7—Howard street, from wagons, $6 50—Superfine, $6 50—fine do. $6 25—Wharf, do. $6 25—White wheat, $1 22 to 1 26—Red do. $1 18 to $1 20—Rye, 45 cents—Corn, 40 cents—country Oats, 25 cents—Beef, 8 cents per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, hog round, $10—Pork, $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $5 50 a $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4 50—Millet, $1 50—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons 35 to 36 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl.—No. 2, $2 37½—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 14 cts. per lb.—Eggs, 10 cts. per doz.

MARYLAND TOBACCO.—same as last report.

University of Maryland.

The MEDICAL LECTURES will commence, as usual, on the last Monday of October next.—Surgery, John B. Davidge, M. D.—Chemistry, Elisha De Butts, M. D.—Practice of Physick, Nathaniel Potter, M. D.—Anatomy, Granville Sharp Pattison, M. D.—Materia Medica, Samuel Baker, M. D.—Institutes of Physick, Maxwell McDowell, M. D.—Midwifery, Richard W. Hall, M. D.

By order,
ELISHA DE BUTTS, M. D.
Dean of the Medical Faculty.

BALTIMORE, AUG. 1, 1823.

BALTIMORE INFIRMARY.

A CLINICAL INFIRMARY having, since last session, been united to the MEDICAL DEPARTMENT of the UNIVERSITY OF MARYLAND, the FACULTY OF PHYSICK consider it their duty, in making the annual annunciation of the MEDICAL LECTURES, to offer to the public a statement of the plan on which the INSTITUTION is to be conducted, and the advantages which its connexion with the University will give to the MEDICAL STUDENTS.

The Infirmary having been built with the view of securing to the Students of the University the benefits of CLINICAL INSTRUCTION, patients with incurable diseases will not be considered fit subjects for admission. The progress of chronic complaints is so gradual, that the features of disease are not in them marked by those striking characters, nor attended with those remarkable phenomena which belong to acute affections.—As the object of the Institution is to unite practical with theoretical instruction, and to enforce and support the doctrines taught in the University, not by idle hypothesis but by demonstration, the latter class of patients, being the one best suited for illustrating the principles of pathology, will be the one selected for occupying the wards of the Infirmary.

The patients will be divided into two classes, MEDICAL and SURGICAL. With the view of instructing the students in the principles and practice of OPTHALMIC SURGERY, one ward will be appropriated for the reception of patients afflicted with diseases of the Eye.

The Infirmary will be visited daily by the attending physician and surgeon, at twelve o'clock noon, and, at these visitations, they will be accompanied by the students. The case of every patient will on his admission, be written out by one of the house-pupils, and, having been examined by the physician or surgeon, it will be entered in the journal, and read, at the following visit, to the students at the bed-side of the patient. It will then become the duty of the Medical attendant to call, generally, the attention of the pupils to the facts of the case—the Diagnosis and Prognosis, and the views which have influenced him in the prescription of particular remedies. It will further be his duty to enter at the bed-sides of the patients, daily reports on the progress of the different cases, and to comment on the nature of the symptoms which manifest themselves.

When the visiting Surgeon is of opinion that an operation is required for the relief of any of the patients under his care, it will be necessary for him, before proceeding to its performance, to summon a consultation of the visiting and consulting physicians and surgeons of the Infirmary. It will likewise be the duty of the visiting physician to summon a consultation on every case, when he may be in doubt as to its true nature.—This regulation secures to the poor the advantages of the opinion and advice of a large and respectable body of the Faculty on the subject of their particular cases, and is a sufficient guard against any surgical operation being performed where its necessity is not fully indicated.

Four Clinical lectures will be delivered in the Infirmary every week. Two medical, and two surgical. The journals, containing the cases and daily reports, will form the subject of these lectures; and the visiting physician and surgeon, will, in them have an opportunity of entering more minutely and critically into an investigation of the nature of the cases under treatment, and an explanation of the views and intentions which have guided their practice, than they could possibly do at the bed-sides of the patients.

In every case, where the consent of the friends of the patients can be obtained, an examination of the bodies of those who die will be made, in the presence of the students. This practice will have the effect of conveying to their minds a knowledge of that most important branch of anatomy—the anatomy of morbid structures, and likewise of testing the justness of the opinions delivered by the medical attendants.

The patients of the institution will be principally selected from the citizens of Baltimore, but as the managers are aware that numerous cases of a surgical nature occur in distant parts of the country, where, from the situation and circumstances of the individuals, professional aid cannot be obtained, they take this opportunity of informing the public, that they will receive such patients on board, at three dollars per week, no extra charge being made for professional attendance, &c. &c. They would also state, that gentlemens' servants requiring operations will be received on the same moderate terms.

The Medical Faculty conceive, that the best and strongest pledge which they have to offer to the public for the patients being attended with care, and treated with tenderness and humanity, is the character and high respectability of the gentlemen who form the board of managers.

The Infirmary will be completely finished and ready for the reception of patients, by the 20th of October next, and the Clinical Lectures will commence during the first week of the session.

The election of House Pupils will take place at the first Monday of October. Those gentlemen who may feel disposed to become candidates for the situation, are requested to apply, by letter, to Dr De Butts, Dean of the Medical Faculty. The board, including washing, firewood, &c. &c. is fixed at $300 per annum, payable in advance.

President.—His Excellency SAMUEL STEVENS, Governor of the state of Maryland.

Vice-President.—EDWARD JOHNSON, Esq. Mayor of the city of Baltimore.

Managers.—Charles Carroll, Esq. of Carrolton—Robert Smith, Esq.—Bishop Kemp—Isaac McKim, Esq.—George Hoffman, Esq.—Luke Tiernan, Esq.—William H. Winder, Esq.—Philip Moore, Esq.—David Hoffman, Esq.—Benjamin C. Howard, Esq.—Jonathan Meredith, Esq. Robert Gilmor, Esq.—Archbishop Marechal—Richard Caton Esq.—Philip E. Thomas, Esq.—Alexander Fridge, Esq.—George Warner, Esq. Reverdy Johnson, Esq.

Attending Physicians.—Nathaniel Potter, M. D.—Elisha De Butts, M. D.—Samuel Baker, M. D.—Maxwell McDowel, M. D.—Richard W. Hall, M. D.

Attending Surgeons.—John B. Davidge, M. D.—Granville Sharp Pattison, M. D.—The attending physicians and surgeons of the Infirmary are *ex officio* managers.

The Boards of Examiners of the Medico-Chirurgical Faculty of Maryland, for the Eastern and Western Shores, are *ex officio* consulting physicians and surgeons to the Infirmary.

AGRICULTURE.

From Memoirs of the Board of Agriculture of the State of New York.

LETTER

To the Honourable Stephen Van Rensellaer, President of the Board of Agriculture, upon Sheep Husbandry, and the cultivation and use of Turnips.

Sir,

I have been solicited by letter from numerous quarters to furnish to the Board of Agriculture a detailed account of the cultivation of turnips, and of the uses to which large quantities may be put.

The method which I have followed ten years, and which has been uniformly successful, particularly this year, is the row system, sown with the drill, as it has been long practised in the best farming districts in England and Scotland. It is described in most of the published agricultural works of Europe, and at page 127, 1st. vol. of Memoirs of the Board of Agriculture. To this description nothing can be added: the process is very simple, and if faithfully executed under favorable circumstances as to soil and season, is sure to succeed. I repeat that I have tried it in various parts of an extensive farm for ten years past, and have never been disappointed. I am confident that upon proper soils, it would succeed with any other person, as I know it has already done, especially with yourself

It would therefore be superfluous to recapitulate the description of so simple a process; but being a branch of farming as connected with sheep husbandry, susceptible of being placed in a very interesting point of view, I have thought that I should do a useful and acceptable thing to the public in submitting to it some opinions upon sheep husbandry, which would give me a full opportunity of incidentally speaking of the cultivation of turnips, and of the invaluable uses to which they may be put.

Before the introduction of Merino sheep into this state by that worthy and spirited friend to this country, the late Chancellor Livingston, very little attention had been paid to sheep. Every farmer had a certain number of what are usually called *common sheep*, sufficient to furnish him with wool for domestic uses. It was not his interest to have more, for as manufactories had not arisen, and it would not bear exportation, wool was an article scarcely marketable in large quantities. The drovers also, to make up a lot of fat wethers, had to travel from farm to farm, picking up a few here and a few there. I have never heard of a single instance where the common sheep were kept under a regular system of improvement, by which is meant the necessary precautions of selecting those ewes which unite the qualities essential to good breeders; observing the same with the males; weaning the lambs at a proper season; keeping the males and females separate until the tupping season, and finally taking the best care that they were kept in good condition the whole winter. On the contrary, those sheep which have fallen under my observation, bore evident marks of having none of these attentions paid to them, and were in fact such bad sheep as promiscuous intercourse and careless management is sure to make, and averaging perhaps two pounds of wool a head.

But the introduction of Merinos was the point upon which the revolution has turned which has taken place in sheep husbandry. The very high prices of these sheep and their wool fastened strongly upon the imagination of many farmers, and the numerous importations in 1811 and 1812, which brought their prices down from one thousand dollars to ten dollars, enabled many practical farmers to get hold of them: large flocks too were sent into the interior, on speculation, by the importers, and they got generally diffused in the country. At length the prices of these sheep fell so low, notwithstanding that fine wool has always maintained its value better than any other agricultural production, that the speculating holders of the Merinos, gradually ceased to take an interest in them, and many large flocks in consequence were broken up and destroyed. Such has been the history of the race of Merinos in this state, which in 1809, were valued at one thousand dollars each, and which I have seen sold for a dollar a head in 1815. Their introduction was nevertheless one of the most substantial benefits this state ever received from the hands of an individual; for independent of their intrinsic value at this moment, which in certain situations is great, (in distant counties,) and will probably always remain so, the attention of the farming interest has been strongly drawn to sheep husbandry, which undoubtedly is the bottom of all good farming; nor in Great Britain, where the just economy of farming is properly understood and practised, is there a doubt on this subject: and if in that country they have arrived at this conclusion, it is only because they have a denser population and greater experience, both circumstances which lay before, and must necessarily occur to us, and to meet which it is well to prepare ourselves.

Amongst the persons who at an early moment entered into the breeding of Merinos with great earnestness, I was one, and I persevered with zeal in that pursuit until a few years ago, when after duly taking into consideration every thing connected with their present profits, and those which they might yield ten years hence, I came to a conclusion which I had been anticipating for some time, and parted with every Merino ram that I was possessed of, and have never owned one since. The reasons however, which caused this determination, are principally applicable to those, who being favorably situated as to the best markets in the state, look to carcass as a great source of the profit to be derived from sheep husbandry, and these reasons I shall proceed to give.

The Merino sheep then having fallen in price to a level with the common sheep of the country, there was an end of every expectation of that branch of profit, which had induced most purchasers to go into this breed, viz: the disposing of superfluous stock at from ten to twenty dollars a head. And if that expectation had not been entertained at first, I apprehend these sheep would have made very little progress in this country. The only advantage then which Merinos were found to possess above the common sheep of the country, was the higher price of the wool which its superior fineness always insured it.

Upon reviewing the facts which had transpired connected with my Merino flocks, up to 1818, and which had been carefully observed, I became satisfied, that after washing the wool well on their backs, removing every thing like dirt from the fleeces, and sending it perfectly dry to market, all of which precautions I found necessary to secure respectable purchasers, the average weight of the fleeces did not exceed two and a half pounds of wool, which sold at seventy cents per pound, (a high average price) would make the wool of each sheep amount to $1 75 a head per annum. A well regulated flock of sheep increases so fast, that it evidently must be kept down, by thinning off annually to that number which the farm has the steady ability to keep in good order; and this is usually done by selling on foot in the fall, or by butchering and sending the carcases to market. This last resource is a very indifferent one for a large farmer. The Merino is a small animal not exceeding 8 lbs. a quarter when grass fed in November, and does not look well alongside of other mutton; besides there is a great prejudice existing against it, and nothing can be more troublesome than disposing of a large quantity of these sheep in this mode, at a time of the year when days are short, and bad weather common. The other method is the most prompt, and least disadvantageous. It being the interest of every farmer to keep young stock on hand, that which has come to maturity will of course be parted with. A sheep which has given six fleeces, is a proper subject to turn off, and I consider a flock of store Merino sheep at that age well sold at 12s. a head. Be that as it may, they are frequently to be bought for less money. Beyond that age, the productiveness of these sheep when kept in quantities, may be said to be past; for they fail very fast, and fleeces diminish rapidly in value. It may be assumed then that the productive part of the life of a Merino, is comprehended within the first six years and six months, and if then sold, according to the foregoing statement—six fleeces at $14s. each, and the sale of the animal at 12s. will give 96s. for the intrinsic value during its whole life. From this sum is to be deducted the charge of maintaining it during that period. The winters here average about 135 days of foddering, and I know by actual experiment, that 7 healthy sheep during that period will eat a ton of hay, which valued at 7 dollars; leaves each sheep charged with a dollar a head for wintering, independent of all the incidental expenses of attendance, fencing, expense of seeding down the land, &c. which will always bring an additional charge of 4s. a head per annum against them. Deduct then these two charges of 12s. annually for six years, and 24s. are left as the neat profit upon each sheep for a period of six years, or the sum of 4 shillings a year neat profit. I am persuaded that every practical sheep farmer, who has had much to do with Merino sheep of late years, and who will have the candour to review these observations, and compare them with his own experience, will admit that the details are reasonable and the deductions fairly drawn. It would appear then that a flock of 1000 Merino sheep only gives a return of $500 per annum neat profit to the owner: which it must be admitted is a very inconsiderable sum, when the circumstances of rent, and an anxious personal attention, are taken into consideration. These conclusions were familiar to me, long before I had the courage to determine upon encountering the forbidding task of remoulding a large flock of sheep, and of changing a breed to which I was partial from the fineness of its wool, and from the remembrance of the great value it bore, when I first engaged in it. No one but an extensive practical farmer can form an adequate idea of the toil attending such an operation, particularly where the new breed itself was yet to be created. It was obvious then that the great defect in Merino sheep, as it concerned my situation, (having several considerable market towns to resort to, and being only 20 miles distant from a navigable communication with New-York, which the great canal when in operation would reduce to five,) was in the want of carcass. My object then clearly was to raise a breed of sheep with a sufficient weight of carcass, to ensure the best prices in the large markets, and to have the wool of a sufficient degree of fineness to ensure a prompt sale. My attention therefore was turned to the new Leicester sheep, a breed established by the care of the celebrated **Mr. Bakewell**, and remarkable for its weight of carcass and fleece, and to the South Downs, a breed celebrated for a fine carcass, with a moderate fleece of fine wool. But all my attempts to procure them from England failed, from the rigour of the laws which prevent their exportation from that country.

I had then recourse to another breed which by a happy accident had been introduced into the state of New-York. They were of the mixed *Bakewell* and *Teeswater* sheep, were only three in number on their arrival, but they fell into the hands of persons who knew their value, and had been judiciously and successfully increased in number. These sheep at a ripe age, (rising three years) weigh from 25 to 30 lbs. the quarter. The mutton is extremely fat, and by high feeding can be carried to 40 and 50 lbs. the quarter. The fleece is rather coarse, but gives a clip of from 7 to 12 lbs. when in condition, and is sometimes carried so high, that entire flocks in Great Britain, are reported to have averaged 12 lbs. of wool a head. When breeders turn their attention to increasing the weight of the fleece, it is almost incredible the quantity of wool which these animals may be made to carry on their backs. On this subject I have thought it would be interesting to copy the following paragraph from Evans and Ruffy's Agricultural Newspaper, dated "London, September 16, 1822. The large quantity of 74 lbs. of wool was clipped this year from three sheep, (two rams and one wether) belonging to J. Chatterton, Esq. of South Somercote, near Louth. The sheep were descended from his Lincolnshire ewes, by a *Teeswater* ram." Here is an average of almost 25 lbs. a head, from a Teeswater ram, being the identical blood we possess, mixed with the Bakewell or New Leicester.

If a very heavy carcass then was the only circumstance wanting to make my sheep stock profitable, the blood was at hand. I had frequently seen quarters from 25 to 30 lbs and knew that wethers of this breed had been sold at three years at 15 dollars a head. This was very encouraging, but as the changing my breed was a matter of serious concern to me, my object being to settle down upon a stock that would be permanent, profitable, and not subject to vicissitudes as the Merinos had been, I was very careful to give the subject proper consideration before I acted upon it. In the end I did not adopt this mixed Bakewell and Teeswater stock, as a breed by itself, for the following reasons.

They were so few in number in the state, and held so high, that it would have been an endless business to have waited a period sufficiently long to form a large flock.

The wool was very coarse, and not fitted for any sort of manufactures then prevailing.

And the most experienced butchers informed me that the high prices they had given for some of these sheep, was principally on account of the novelty of the breed, and to encourage the holders; but that mutton of 25 lbs. a quarter was not likely to prevail here; being too gross for genteel tables, and would probably never become a staple commodity amongst the labouring classes, who are accustomed to pork: whilst in Great Britain, those classes feed entirely upon fat mutton. They almost all agreed that mutton of from 15 to 20 lbs. a quarter would be more profitable to the grower as well as the retailer.

I was satisfied with this reasoning, and determined at once to procure some of the finest rams of the mixed Bakewell and Teeswater, and couple them with my Merino ewes. In this manner I hoped to raise the carcass of my flock from 8 lbs to 18 lbs. a quarter, and still have a quality of wool on hand sufficiently fine to command a ready sale—a sort of half Bakewell half Merino. Accordingly, in the fall of 1819, I selected 200 very fine Merino ewes, and had them tupped by some heavy English rams, with moderate even fleeces, and thighs less coarse than they usually have. The ewes lambed in March, and from the first the lambs very much resembled their sires. The lambs continued the next summer to increase in size, far beyond the Merino lambs which had been dropped at the same time. In October most of them were heavier than their mothers, having carcases from thirty to forty pounds. The next shearing time they averaged four pounds a head of wool, and many of the best, five pounds, clean washed on the back. Their wool is equal to what is called average half blooded Merino, some much finer—it was all sold immediately for fifty cents a pound. I was so pleased with the success of this experiment, that I put away the whole of my Merino rams, and have continued every year to breed from the best English rams I could meet with The ewe lambs which dropped from this cross in spring, 1820, had attained a fine growth in fall 1821, and in spring 1822 produced me a crop of lambs three quarters blood, which at this moment (November) are equally admirable for their size, and the even fineness of their fleece. I am now satisfied that perseverance will enable me to establish a breed of sheep that will be invaluable to this state. Sheep which at three years will give from 16 to 20 lbs. the quarter, and 6 or 7 lbs. of wool, of a long staple and equal fineness to the ordinary half blooded Merino. I have at present about 600 of this mixed breed on my farm, besides 300 ewes that have been tupped this fall. By attention and judicious selections, I hope by and by to produce rams equal in every point of form to the best English rams that have ever been in this country, and with fleeces fine enough to perpetuate a breed, that will unite the rare value of the Dishley carcass to the Merino wool.

I have before stated that the fleece being the most valuable part of the Merino sheep, it is of course the interest of holders of Merinos to keep them as long as the fleece is productive, and I have assumed six years therefore as the productive part of the life of a Merino. It is difficult to form a very accurate estimate of the comparative advantages of the different systems after which sheep husbandry may be pursued. These are various. Such as maintaining a stated number of ewes, keeping the most thriving wether lambs, and selling them grass fed, or stall fed, when at a mature age: or keeping nothing but ewes, selling all their male lambs when fat, and keeping the ewe lambs, with a view to have greater number of ewe lambs to select from as breeders, and thereby being able to turn off as many inferior ewes to make room for them. This would seem to be the true way to build up a race of superior sheep in the shortest period of time. Calculations in which the returns and charges are fairly stated of these different systems are rather intricate, as all practical men know; because ewes and their female progeny breed fast, and yet their productiveness varies with the uncertainty of the weather during the lambing time. The worst of all systems unfortunately is the one generally followed, that of selling the finest lambs, whether ewes or males, to the butcher, and keeping the worst as store stock. Nevertheless although such estimates are not frequently very accurate, yet where there exists a real difference in the advantages betwixt two systems or two breeds, an approximation to truth may always be shown in a sufficiently striking manner, and I shall endeavour to give a comparative statement of the Merino sheep and the mixed Dishley and Merino, in a very simple form, discarding every circumstance that could make it intricate or very uncertain, and adhering to facts known to me by experience.

I shall suppose a grazier entering into the sheep business who keeps no ewes, and who forms his stock by the annual purchase of wether lambs, which he maintains until they are of a mature age.

He begins with the Merino stock, and gives $2 50 for a wether lamb, in the year 1822. In the year 1828 he will have wintered and summered it six years, at a charge of $1 50 per annum, and will have taken six fleeces from it of 4 lbs. of wool, sold at 70 cents a lb. In the fall of this last year he sells it at 12s. All of which may be thus stated.

Six fleeces of 4 lbs. each, or 24 lbs. at 70 cents,		$16 80
Sale of the sheep,		1 50
		$18 30
Charges.		
Cost,	$2 50	
6 years maintenance at 12s.	9 00	
	$11 50	$11 50
		$6 80

This divided by six gives him $1 13, as the neat profit per annum on this sheep. Twenty-four pounds of wool for the first six years of the life of a Merino wether, I consider a good return, if it is clean and fine enough to fetch 70 cents a pound. He then tries the mixed Dishley and Merino. He gives $2 50 for a wether lamb; but as this sheep when it has attained its third year, is at its maturity, and has a fat carcass that will dress down to 20 lbs. a quarter; he sells it at that period as first rate mutton, and purchases another wether lamb, which when it has attained its third year, he sells as he did the first. Having wintered and summered each of them three years, and taken three fleeces from each, the statement may be thus made.

Six fleeces of *7 lbs. each, or 42 lbs. at 50 cents		$21 00
Sale of two heavy wethers,		10 00
		$31 00
Charges.		
Cost of two wether lambs,	$5 00	
6 years maintenance at 12s.	9 00	
	$14 00	$14 00
		17 00

This divided by six, gives him $2 83 as the neat profit per annum on these two sheep. According to these two statements, a flock of 500 Merino wethers, would make a return of $565, neat profit per annum, whilst a flock of 500 Dishley and Merino wethers would, under the same circumstances, make a return of $1,415, a difference of $350 per annum, in favour of these last.

I consider this the fairest way of stating the subject for an examination of the comparative advantages of these different breeds made after the common practice of keeping some ewes, some wethers and some lambs, would be intricate, and certainly not so susceptible of a clear statement. Besides the practice of buying young stock, and grazing it to a proper age, is deemed by some experienced men, as less troublesome and more profitable than breeding their own stock. Some persons wishing to look more critically into this matter, will perhaps enquire if it is not more expensive to maintain these heavy sheep than the light bodied Merinos, or in other words, if they do not consume more grass and fodder, enough to balance the stated difference in their productive value. To this I would answer, that it is reasonable to believe that a large animal usually requires more food to sustain it than a small one, but that I believe there are considerations which again compensate for this apparent objection. Mr Bakewell, to whom the world is indebted for the invaluable breed of sheep usually called Dishley, spent a long life devoted in the most unremitted manner to carrying the breed of various animals to a perfection unknown up to his time. He met with great opposition, but his success at length was complete. It is stated that the first ram he ever let out was for twenty shillings. In the end however, so much was public opinion changed, that he has received the sum of one thousand guineas for the hire of a single favorite ram in the course of the season. Mr. Bakewell has been accused of sedulously throwing a mystery over his proceedings, with a view to embarrass those who were anxious to imitate his peculiar plan of improving animals, and to rival him. This may very well be believed, and hence perhaps he has not left behind him a very accutate account of all the details of his system. Enough however has transpired to show that he was a very close observer of nature, and that he owed his success more to natural sagacity, than to any accidental discovery.

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* *I subjoin one of many communications to me: it is from a respectable farmer in Washington county.*

Dear Sir,

I have the pleasure to inform you, that the ram lamb I had from your flock of the Dishley and Merino breed, in the year 1820, *has continued to thrive and is become a remarkable sheep. At shearing time,* 1821, *he gave me 7 lb. 5 oz. of fine washed wool, and this year betwixt 8 and 9 lbs. as clean as it could be washed on his back.*

I remain, Sir, Your's,
LEMUEL SIMMONS.
Easton, August 10, 1822.

It was a favorite thought with him, to consider the best animal to be, one *which brought most money to the farmer in the shortest period of time.* Hence the faculty of being *ready for market at an early age*, was one he anxiously sought to impart to his sheep.

With this object in view, he looked rather to the constitutional habit of sheep, than to their external points. Lambs that would feed quick, get fat soon, loll and sleep a great deal, were sure to attract his attention. He perhaps thought as many others do, that a propensity to fatness, is constitutional with animals, as well as with our own species, and that fat sheep, as well as fat people, do not require so much more nutriment than lean ones, but that the same quantity of food keeps up their condition, because they sleep a great deal, and do not ramble about as thinner animals do. Following this thought up, he would necessarily see the importance of encouraging further this natural propensity, by providing them with the best pastures, where they could satiate themselves at the least expense of motion. This natural reasoning shews the inseparable alliance between good husbandry and good agriculture.

The principles which regulated Mr. Bakewell's practice were so just, and led him to such unrivalled success, that at this moment there is not a good flock of sheep in Great Britain (pure Merinos and South Downs excepted) which is not bottomed upon the Dishley blood. A fact which I am intimately convinced will be common to this country in a very few years.

I trust this digression on the merits of Mr. Bakewell's system, will not be thought impertinent to the subject, but will rather suggest a satisfactory answer to the question, whether "it is not more expensive to maintain these heavy sheep than the light bodied Merinos?" That a large lean animal will always eat a great deal more than a small lean one, I readily concede; but giving due consideration to the theory of the foregoing observations, sustained as it unquestionably has been by my own experience, I declare it to be my belief that fat animals thrive more upon the same quantity of food than lean ones, and that an acre of produce consumed by fat sheep, will produce more money in the end to the farmer, than a like acre consumed by lean sheep, and this is saying every thing in favour of the former.

But there are many considerations to be urged in favor of these sheep, which were I to enter largely into them, would extend this letter too much. The first in importance however is, that whoever goes into this breed, and does it justice, in despite of every circumstance, must get his farm into a profitable condition. These sheep must always be kept in a thriving state, and never suffered to fall off. Hence in times of drought, when grass is low, fields of rape or turnips, or some succulent vegetable, should be at hand to turn into, and rape and turnips, requiring manure and careful cultivation, leave the ground in the best possible state for a succeeding crop of grain; to the crops of grain, succeed clean grass seeds, and as every year new fields of rape and turnips are required, so every year a fresh part of the farm, is put into the best condition, and by steadily following this train, at length the whole farm is brought into the most productive state it is capable of being placed in. It is universally considered in Great Britain, that a well selected stock of sheep is the essential item of the prosperity of the farmer. The turnips, the rape, the tares he sows are all for his sheep, it is to their wool and his fat wethers that he trusts for the payment of a rent perhaps from four to ten thousand dollars, rather than to precarious crops of grain; which, if they were his only resource, and were to fail him, would bring down ruin at once. Sheep are then truly the foundation upon which all his operations are raised. Without them he could not manure his fields, nor could he, without manuring, raise grain to pay any rent whatever, or perhaps even to pay the unavoidable expenses of his farm.

A regular system of husbandry resembling this must soon prevail here, and there is nothing to prevent it but a supineness with some, and an obstinacy with others, of which perhaps farmers have as full a share, as any class of men. The circumstance, I apprehend, which most tends to protract the universal introduction of an improved husbandry, is the easy condition of the occupiers of land; happily ignorant of the burdens of the excessive rent, tithes, and poor rates, which have in a great measure by compulsion produced the improvements in husbandry of the English Farmer. There is certainly nothing in the difference of soil and climate which stands in the way of their being introduced here, for all the green crops and roots upon which so great a dependence is placed in European husbandry, grow quite as well in this country. Nor have they one single apparent advantage over us, save the mildness of their winters, which admits of turnips being fed on the ground where they grew; and which, when every disadvantage is considered of the diseases which are introduced upon their sheep by the moisture of the climate, and the consequent necessity of feeding them continually on low wet ground, give us absolutely a better prospect of establishing a successful husbandry than the British farmers.

(To be continued.)

FOR THE AMERICAN FARMER.

REMARKS ON HEDGING,

And the interest of land holders, as it regards various kinds of fencing.

(Concluded from our last.)

The inclosing our land, whether arable or wood, has become in many parts of the country, a serious expense, and such an one as cannot be well avoided. To adopt that which is least expensive, and at the same time most durable, is certainly most desirable. There are two kinds to be recommended for their duration, *stone* and *thorn*. The former must be limited to districts where the means are present, as it is composed of too heavy a material for distant transportation, (yet an excellent fence when well built,) of which I shall say something in future. The thorn may be cultivated in any part of the United States, as there is a variety of kinds suited to all parts of the country, as is indicated by their spontaneous production.

The cockspur and Virginia kinds have been mostly brought into use for fencing; the former a native in my state, (Delaware.) The Virginia introduced about the year 1808, has been used with success, being found congenial to our climate. The rivet and English thorn was brought and used by some of the early settlers from Europe, but finding a better substitute in the country, they naturally were neglected

The mode practised by those that continued hedging, was by planting and throwing up a ditch bank; and when the thorn grew to their full height, or so as to become cambrous they were cut near the root, but not wholly off, and bent down on the defensive side, (or into the roads when they happened in those situations.) Thus they lay, encouraging a growth of rubbish, while a new hedge rose by sprouts from the stumps, the fallen part yet living also; thus it remained until it proved truly a *hedge row* of various productions, even the forest trees partook of the shelter, for the nut or seed grew amongst the general assemblage. Other farmers, who paid a little more attention, when the young growth was advanced, would cut away the fallen part, to prevent rubbish, and burn it, letting the second growth advance, until it became large enough to undergo the same operation of the former. This was the kind of living fence, that has been in use many years in some of our native thorn districts, all tending to the same thing a *hedge row*, as they were all more or less combined with various natural products of some kind, therefore not a distinct thorn hedge.—Neither were they clipped or trimmed, because they became too forbidding for that operation; after passing the proper size, and before they attained the sufficiency to make a fence, they were considered not to require it. Thus the business went on, presenting an unpleasant appearance; for when at their height, the traveller, on passing the road, could have no view of the farm he was passing, more than if he were in the midst of a forest.

These are the appearances that have given a paralytic stroke to *hedging*, but they are *hedge rows*, not hedges, and it is the confounding the idea of the two that brings the hedges into disrepute. I had for several years thought much of live fence, but discouraged by those that I saw, until a friend sent me some quicks as a present, raised from the seed of the Newcastle thorn, which I planted, being in the spring of 1800—the Virginia kind was not then known with us.

I then began the work unexpectedly, but formed a determination to make a *hedge*, a thing I had never seen, though I had formed an idea in my mind as a pattern for the purpose, and kept that idea in prospect, which has long since been fully verified and produced occular demonstration. The Virginia kind had the effect to perfect the thing in a more delicate feature, the former makes a good hedge, the latter generally is propagated now.

Soon after this, the first number of the American Farmer was very politely sent me by its Editor, requesting any useful matter for that paper—I had nothing better, as I conceived, than a few remarks on my progress in hedging, pointing out my misfortunes as well as success, and as leisure offered, communicated my experiments, from time to time, which were published in the first volume, and one in the third volume, page 116, on trimming.

I expected some able hand to have taken up the subject, on seeing some attempt made, and from whom I should have gained the knowledge requisite to go through with perfecting my object—but nothing appeared as it regards the encouragement of thorn; some other substitutes have been proposed; I have therefore advocated the thorn, until I have had the gratification of seeing it succeed with unrivalled excellence, and approbated by all that have seen *our best hedges*, theorists as well as practical farmers.

I am able now to say with clearness, what a hedge will cost, made of the Virginia kind; there are men who have undertaken to raise them from the seed plant, prune and trim at stated prices, until matured; this led me to calculate from our progressive knowledge, and I find *forty cents* a rod will complete the raising to mature age, and one cent a rod will fully maintain them for ever after, if duly attended to, and applied with judgment. No failure has ever appeared, except some local cause is present, therefore durability is now well established.

This is the best time to give the last trimming for the season, at least we think so, (August)

We must be allowed to adhere to our practice, while it shews good effects, and none other to contradict it.

Stone is a very good article for fencing, where they abound and need clearing off the land for cultivation. The mode I have adopted is never to reduce them by breaking less than convenient to draw, and that may be easily done, if under a ton weight. I place the large ones in the bottom, laying cross ways in the foundation of the wall, if stony land on the surface, no digging is necessary for foundation. If clear of stone, excavate from eight inches to a foot for foundation; by laying the large stone cross the wall, it projects on each side, as you build on them, a wall in width according to the size of the stone battering on each side, consequently thin at the top.

My stone being of a quality to build on those foundations, two feet, falling off to eighteen inches on the top, then capped with the round or roughest ones, such as will not so readily build in the wall, they are rolled up a plank, and laid across the top. This forms a forbidding cap or top to the fence, and is the readiest built foot in the wall. The foundation stone generally raises from one to two feet high in the first place, so that no line is wanting, other than to stake out with, then line on the top of them, and not more than three feet is wanted built to line, before the rough capping comes on, no matter how much they project over, they are the more defensive, and keep all safe from being shoved off, as light stones are more liable to be.

Now to transport those heavy stones, say from ten to twenty hundred weight, a pair of cart or wagon wheels may be used for that purpose, with simply an axle and tongue, or shafts, as the case may be, for oxen or horses—a roller is fixed across on the top immediately before the axle, with holes through it, for crow bars, to put in as levers to raise by a chain, which is put round the stone, and a link slipt on a strong iron pin that is drove into the roller by the strength of two men. A stone of a ton weight is hoisted in half a minute, and a pair of oxen travels with it to the place wanted, and may be dropped on the spot with ease; this mode lays the foundation of the wall, and at the same time raises the heaviest part of it, according to the size, the larger the better.

If wheels be made purposely, we have them higher than those of a wagon, and the axle longer, they will carry larger stone, and if you have blown rocks to move, they are better adapted to the purpose; if you can pass a chain under them, they may be raised out of the pit or bed where they lay, and by this means you clear land and fence at the same time; this will apply to land that is stony and yet worth clearing.

But if the stone is very distant from the place that the fence is required—thorn is to be preferred.

It should not be forgotten in calculations of this kind, how much land is gained by the removal, and how much is saved in ploughs, harrows and implements of husbandry in farming. Such land some may deem it impracticable to clear, but a little resolution and good management soon overcomes all those difficulties.

CALEB KIRK.

Brandywine, 8*mo*. 1823.

FOR THE AMERICAN FARMER.

ALBION'S 7th LETTER TO HIS SON.

"*Distressing hour! 'tis very late!*
O mercy, mercy, guide him home!
Hark! then I heard the distant gate,
Repeat it, Echo! quickly come!
O blest assurance—trusty steed,
To thee the huried road is known;
Home all the spur thy footsteps need,
When loose the frozen rein is thrown—
Where have you stray'd? put down your load,
How have you borne the storm,—the cold?
What horrors did I not forebode.
That Horse is worth his weight in gold!
Thus spoke the joyful wife."

The hackney horses on the Albion farm, were descended from Regulus, Atlas and Fireaway, three famed horses, the two former for blood, and the latter for fast trotting—he having trotted about the year 1790, from Newmarket to Cambridge, a distance of sixteen miles, within the hour, for two hundred guineas, against a horse descended from Atlas—the Albion horses had also a small admixture of Wildmore blood in them, a breed now nearly lost, in consequence of the drainage and enclosure of the Wildmore and adjoining fens, since the year 1800, containing about fifty thousand acres of land, reclaimed from the ocean, and washes on the eastern coast of the kingdom, and formerly, almost entirely stocked with wild horses and geese, although now it is nearly the garden of England; as perhaps it and the adjoining lands, surpass any other tract of land in the world in productiveness, particularly fat cattle, horses, sheep, long wool, wheat, oats, thorn fences and good farm buildings.

In describing these horses, much must be repeated, that has been said of the dray kind, but perhaps it is as well to do so, as to omit any observation that may chance tend to give you more just ideas of a good horse, which of all animals is the most difficult to select, nice *action* being required also with a nice frame; what however is here said, as indeed in my other letters, is not theory, but the result of my own observations, and therefore I would have you take them for just what they may appear to be worth, after being tried by your own maturer judgment.

In examining an animal, begin at the head, and go step by step, to its other extremity, so that when you have finished, you can give a *good reason*, for your opinion of it, and never consider yourself as having acquired even the first rudiments of your business, until you can do this; for although you may tell me, you "possess lands from Pennsylvania to Maine, and own flocks and herds more numerous than Jacob, or have the honor of being a member of the society of *learned* farmers!" Yet these advantages are all within the reach of a man of wealth, and do not necessarily constitute him a man of judgment; just as well might you say, as the wit did to Dr. Johnson, "he who drives fat oxen, must himself be fat."

The best of the Albion hackneys were from 14 to 16 hands high, and had wide nostrils, which enabled them to breathe freely—lips thin and mouths small, when young—ears long, bespeaking blood, and also enabled them to hear well—eye sockets wide apart, and eyes bold, enabling them to see various ways at once—the ridge of the nose rather hollow, bespeaking barb blood—head small, and hanging nearly perpendicular from the ears, free from flesh, and wide between the lower part of the jaws, which occasioned them to rein up handsomely, without pressing on the windpipe, and is of vast importance in a hackney, as a horse seldom rides light and pliable on the rein, if he be contracted under the jaws, and of course sets out his nose like a goose, (the American horses are frequently defective in this respect, which occasions them to require those formidable bridle bits, reins, martingals and the like, we so often meet with, and after all, their riders have but little command over them)—neck rather short and inclining upwards from the withers to the ears, giving a ready passage from the lungs to the nostrils, and the rider a good command of the head—withers high, thin, and inclining backwards, by which means the saddle is kept from the shoulders, and the rider far more comfortably seated—shoulder blades fitted neatly to the withers, long, inclining backwards, and nearly together at the top, and wide apart, and forward at the lower extremity—arms rather long, strong, and full of muscle, so that a great proportion of his height was between the knee and the withers, as in action, the shoulders and arms act like levers, and of course should be long—knee joints, thick and wide apart—legs from the knee to the fetlock, short, strong, black, free from rough hair, and full of hard strong sinews at the back part of them, occasioning them to look flat at the sides, (here the American horses are also frequently deficient; their legs mostly being too round)—fetlock joints short, feet round, that being their natural shape—hoof of a dark color, and in horizontal wrinkles, frog large and free from moisture, or the hoof will soon contract, and the horse have tender feet—chest broad and forward—back short—loin broad, and joining neatly to the back—ribs long, broad and well rounded—rumps long, neatly turned, not clifted, not wide at the top, nearly in a line from the setting on of the tail to the back—tail strong—fundiment small, bespeaking all right within—hips fitting snug to the loin and ribs,—sheath large—this form of body bespeaking a strong hackney of good constitution—thighs long, full of muscles and flesh, nearly down to the hock—hocks rather large, flat at the sides, very firm and boney—in colour, prefer a horse of a blood bay, or brown, with black main, tail, and legs—without any white.

In forming an opinion of the action of a hackney, let the groom put on a snaffle bridle, and without a saddle, ride him from you at an easy natural walk, and place yourself directly behind the horse—he should now go off freely, carrying his head rather upwards, and his nose projecting a little from the perpendicular with his ears, his eyes being about level with his withers, his knees rather wide apart, inclining outwards, and carried high, and forward, with a considerable deal of action—fetlock joints carried in a similar manner, so that the whole shoe may be very visible to you—his toes going straight forward, or by no means turning out, or he will cut, and of course tumble—his hind legs and feet going about square with, or rather nearer together than the fore feet, and as forward and under him as possible, but by no means even reaching or striking against the fore shoes, unless he be only a colt, and then perhaps he may mend of it—when he returns, and when he passes you, see that he sets the heels of his feet on the ground first, for if the toes strike first, he will stumble,. and next tumble—his knees cannot be too forward, nor his weight too much on his hind legs—then put him into any easy trot, and place yourself as before—the peculiarities of the above action should now be more perceptible, and as the groom keeps increasing his speed, and passing you, observe that the horse stops and turns freely, without thrusting out his nose—and on starting, that he first raises his forehead, by drawing his hind legs forward, and goes off freely, bearing light on the rein, and carrying himself airy, and his principal weight on his hind legs—the forelegs being intended principally to balance the body, should nearly do all their work from the elbow downward, and play very freely—then desire the groom to canter; this being a ladies mode of quick riding, should be done with great ease, the horse should now, from the walk, raise himself on his hind legs, and throwing forward the off fore foot, go at once into a canter, feeling to the rider to incline his forehand a little to the near side, his forehand high, and nearly all his weight on his hind legs, treading on the ground very light, and his whole action airy—from this pace you may, if you choose, have his action increased to his full speed, but if he does the first two or three paces well, never mind his galloping, as farmers have no business with race horses, leave these to men of fortune; indeed you must not expect to meet with a fast galloper, and a good hackney united, the former going near to the ground, and the latter high from it—but bear in mind, that no horse ought to be considered a good hackney, that cannot readily and freely walk five miles, and trot, with perfect ease to himself and rider, from eight to twelve miles within the hour. When you have thus far examined the action of a horse, let the groom alight, and walk and trot him in hand, this he should do with perfect freedom, carrying himself as before, then let him be saddled, and all the same scene repeated, then, and not before, mount him yourself; you must now principally judge of him by feeling, you should feel to have nearly the whole horse before you, perfectly light and tractable in hand, with his hind legs very much under him, and nearly all his weight on them, his forehand rising high, and going light over the ground, his knees being very perceptible to you, high, much bended, and forward; these peculiarities should be very perceptible in all his paces—and when he canters, his off knee far advanced before the other, or he will never carry a lady with comfort to herself; but walking and trotting, in a superior manner, are the peculiarities of a good hackney, and if he can also canter well, so much the better, but never suffer a horse to rack or pace—the walk, trot and gallop are the only natural paces of the horse, and no others are becoming, or of any use to a gentleman to practice in riding.

Hackney horses ought to be well trained when young at the leaping pole, as they are good soldier's horses, and frequently make good hunters—indeed the late king George generally preferred fast trotting horses, when hunting the stag, or on the road, and he mostly left all his courtiers and attendants behind him, when he was on horseback, and tried to do so.

ALBION.

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FROM THE DARTMOUTH (N. H.) HERALD.

KEEPING HORSES.

Every gentleman, who is obliged by his health or his business to keep a horse, complains of the enormous expense incurred by it. If allowed to eat and waste as much as he chooses, a horse will consume from four to five tons of hay in a year, besides the necessary grain. But it is asserted, from actual experiment, that ten pounds of good hay, with two quarts of corn a day, are enough to keep a common horse in fine order.—Ten pounds of hay a day are 3650 pounds, little more than a ton and a half, a year—and two quarts of corn per day, are about twenty-three bushels a year. Call hay seven dollars a ton, and corn four shillings a bushel, and you make the annual expense of feeding a horse twenty six or seven dollars, about half as much as it commonly costs.

To keep a horse in the cheapest manner, let him stand on green turf, dug up pretty thick, and placed on the floor of his stable—let him be carefully and faithfully curried every day. This is of more importance than is sometimes imagined. It opens the pores, and preserves a healthful state of the skin, on which, in horses, as in men, depends, as much as on almost any thing else, the proper and healthy operation of the various animal functions.

Although the inferior animals are not, like men, subject to unnatural appetites, on account of unnatural stimulants received into the stomach, they unquestionably often consume more food than is necessary to maintain their vigour and spirit. This surplus it is economy to ascertain and retrench.

Corn is cheaper than oats for horses, because there is more heart in a quantity of the same price. It is better to be given two or three times a day in small messes—and to be given dry, that the mastication of it may keep the mouth in a healthy state.

To measure hay, the tare of a basket may be taken, and the hay given from it in small quantities through the day, but chiefly at night.

A horse that is not used, should be fed with corn but sparingly. It should be occasionally salted.

It is not perhaps generally considered, that horses are subject to colds and fevers, as really as men. They should therefore be used with great tenderness and delicacy, and often washed in cold water. The pulse generally indicates the health of a horse. It may be felt about an inch back of the eye, and in health beats about 35 strokes a minute.

The great secret in making horses look well and do well, is attention to them. Men who are above looking to their horses, will seldom ride good ones.

In using horses, it is better to drive briskly and stop often, than to drive even slowly by long stages.

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FROM THE GLASGOW JOURNAL, (SCOTLAND.)

MANGEL WURZEL.

Mr. John Hall, of Little Marshall, Ide, near Exeter, recommends the cultivation of Mangel Wurzel. The land is dressed, drilled, and manured in the same way as turnips are cultivated in Scotland. The seed is covered not more than an inch deep; when up, and having six leaves, let the plants be hoed out to one foot distance in the rows, which, (the rows,) if two feet apart, will give upwards of 20,000 plants an acre; and should these average 10 lbs. each, (I had many last season upwards of 18 lbs. although an unfavorable time prevailed,) the produce would be between 80 and 100 tons of food.

Keep the intervals horse-hoed as often as convenient, and as long as the luxuriant growth of the leaves will permit. The seed-time for this plant is best between the 20th of April, and the 1st of May, by which last named period those who are desirous of a superior crop will do well to have their sowing finished.

The same care that is bestowed on potatoes for their goodly preservation is requisite for well keeping mangel wurzel; and it is of particular consequence that the roots be housed in dry weather, and before frost sets in, as, if housed wet, they are apt to get woolly and bad tasted, (not, therefore, so suitable for milch kine, for whom they are, when good, peculiarly desirable;) and, if frosted, they become slimy and rotten, or what is provincially termed here, "they slope away." When taken care of, by caving or housing in a dry situation, they will remain good till May or June. If these roots are given carelessly to cattle when first taken up, or, to speak generally, any time before Christmas, they, containing as they then do so much moisture, are apt to blast and scour them; and I have seen intoxication produced by them, given fresh-gathered, and in too great quantity; and had not bleeding been had recourse to, death would have ensued. All that is necessary to be observed in the early season, is, that the supply of roots be moderate at a time, and hay, straw, or chaff, given between the servings with mangel wurzel; as the season advances, the quantity of roots may be increased, and the dry food diminished. Milk and butter from mangel wurzel are peculiary sweet and fine; and beef, produced from feeding with this root, is excessively juicy and rich flavored.

The root will not require such excessive deep land as many have imagined, its chief growth being out of the ground; and though much benefitted by frequent hoeing, it is by no means right to earth it up, as by that plan the growth is retarded till fresh fibrous roots are thrown out in search of nourishment near the new made surface of the surrounding earth.

Nor let the grower of mangel wurzel shrink from giving his field an ample supply of good rich manure, as his well fattened land will return him five-fold profit if he gives it with an unsparing hand.

And now, though last, not least, for the cultivator's consideration, mangel wurzel is not subject to the depredations of the turnip beetle.—Neither will that farmer be troubled with smut in his corn who steeps his seed wheat in a solution of sulphate of copper.

FOR THE AMERICAN FARMER.

In answer to Thos. Wright, of Eastwood—American Farmer, Vol. 5, p. 175.

FERTILITY.—This expression embraces a subject of vast importance to all who wish to profit by Agriculture. To assist nature is the art of husbandry. And they, who wish to profit by farming, should be careful not to apply their labour in an improper manner, or at an improper time; therefore the present enquiry is a subject of much interest.

MANURE.—As we can only assist nature, we should be careful, and not operate against her long established laws, lest we should be the losers by so doing. Nature places the manure, (or vegetable matter,) on the top of the ground, but under the shade of timber in the forest, and grass on the plain, which protect it sufficiently from the rays of the sun to prevent evaporation; but there the atmosphere has the greatest influence on it, of course there it will decompose fastest; therefore the most proper situation to place it, because the quicker it decomposes, the more benefit will be derived from it, as it can be of no use to vegetation, until it is not only decomposed but in solution. But in applying manure in the field, where there is shade of neither timber nor grass to protect it from the rays of the sun, which would cause too great an evaporation; there can be no doubt but it would be best to cover it with earth, but the shallower the better, say from one to two, or at most three inches.—I have seen clover (and other vegetable substances) which had been turned in seven or eight inches deep, and laid there 12 months, and then turned up again, without any apparant alteration, except the colour, whilst that which had been turned in only two, three or four inches, was entirely rotten, (or decomposed.) Those circumstances have confirmed my opinion, that it is best to cover manure entirely, but the shallower the better.

PLOUGHING.—Deep ploughing is much the best on many accounts. 1st, on inclined situations, it qualifies the ground to receive and retain more moisture, which produces two good effects, one is that it prevents the land from washing, because so long as the ground will absorb the water it cannot wash; the other is, that the crop suffers less with drought. 2dly, on very flat (or level situations,) it affords an opportunity for the water to settle down a little from the surface, and prevents vegetation from scalding (or drowning) out in the summer, and also prevents the frost from injuring vegetation so much in the winter. Husbandmen who have not been in the habit of ploughing deep, cannot well conceive how valuable deep ploughing is in tillage as to the washing of land, moisture retained, and the effects of sun and frost. But in the common process of deep ploughing at one operation; there is very strong objections; that is turning the soil down too deep, or mixing too much of the clay or under strata with it; to remedy this unpleasant effect, the ground should be ploughed at two operations, first shallow with the barshare (or fallow) plough, and fallowed, or the ground cross ploughed with a substratum plough.

The substratum plough works on the principle of the scarifier, to any depth, without turning the soil down, or mixing the under strata with it. For the husbandman to see his land in a perfect state of tillage, from 10 to 15, and even 18 inches deep, and that without turning the soil down too deep, or mixing any of the under strata with it, but having all the manure and soil, or vegetable matter at or as near the top of the ground as he may find it best, is a subject which must be well pleasing to every interesting husbandman, that wishes to fertilize his land in the most perfect manner.

SUMMER FALLOWS, must be the best preparation for a crop of wheat, except in very rich land, because a preceding crop will certainly exhaust the land, and render it less productive.

With a desire for the improvement of Agriculture, and the benefit of the patrons of the American Farmer, and its Editor, this is forwarded with great respect.

GIDEON DAVIS.

George Town, D. C. 8mo. 23, 1823.

N. B. I think it right just to say, that I am much pleased with Charles E. Rowand's mode of Irrigation, and would take the liberty of differing with the Editor of the American Farmer, as to the draft being made easier by placing the hogshead on a pair of low wheels. If he will look at this subject again, he will soon see, that as this hogshead is to move over uneven and soft ground, that the higher the diameter of the circle on (or within,) which it is drawn, the easier it will surmount the obstacles which impede its progress. I suppose that instead of rendering the draft easier, that addition would add 100 per cent. to it—and lest some might try the experiment, and be discouraged with it, on account of the draft, I have taken this liberty. I suppose that to roll the hogshead is the easiest manner in which that much weight could possibly be moved along.

G. D.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir—The facility with which a wheel carriage is moved, all other circumstances being supposed to remain the same, is *directly* proportionable to the diameter of the wheels, and *inversely* as the depth to which they sink in the earth; but the depth to which they sink, is inversely as their breadth, or "tread," therefore, the facility of moving them will be as the diameter and breadth, conjointly.

In the machine for irrigating with salt water, the "felloes" supply the place of wheels, and therefore, to place the barrel on a carriage, with wheels, would only add to the weight and expense, unless the wheels were made larger and broader, than the "felloes" on the barrel; but these may be increased at pleasure: consequently, wheels are useless.

In soft ground, where the felloes would sink considerably, perhaps the best plan would be to connect them by strong staves, so as to form a complete cylinder round the barrel, at the distance of 3 or 4 inches from its surface. By this means, the machine instead of injuring the ground, might be highly beneficial, by supplying the place of a roller.

Respectfully your's,
JOHN D. CRAIG.

HORTICULTURAL.

PECULIAR CHINESE PEACHES.

The London Society for the encouragement of Gardening, (called the London *Horticultural* Society) has lately given an account of the flat peach of the Chinese, with a finely coloured engraving of the fruit; which has an open top like the English fruit called the medlar. It was imported into England in 1820. It appears, according to later accounts, to possess an excitability exceeding any that is to be found in peaches of other kinds; that is, its sap is put in motion by a much smaller increase of warmth. In 1821, its blossoms unfolded in January in a peach house, the glass lights (or windows) of which were all off; and the fruit set freely with the protection only of a mat. In 1822, it blossomed in November, before the lights of the house was put on, and on January 3d, when the account of this was written, the peaches were as large as peas, with no more artificial heat than would just exclude the frost. It is also remarkable in this peach tree from China, that it retains its old leaves in full vigor, until after the new ones are put forth.

PERENNIAL CABBAGE—WINTER BEAN.

In the Duke of Bedford's garden, at Woburn, in Bedfordshire, they have a variety of cabbage, which yields cabbage yearly from the same root; and is thence called *perennial.* If the sort be good it might be advantageous perhaps to cultivate it here, on account of the frequent destruction of young cabbage plants from insects. Perhaps too this cabbage may be produced earlier; or may bear to have cuttings taken from it for early greens.

A Winter Bean, which is of the string kind, has lately been cultivated under this name in the north of Italy, and round Geneva in Switzerland. It is sown in the fall, and when cut off by the frost in the Spring, pushes out fresh shoots, and comes earlier into bearing, and is freer from accidents, than our common string beans.

Latterly the English have endeavoured, by peculiar management, to make the English Cranberry grow in dry beds; and probably they will succeed in their attempts. Should this happen, without much trouble, it will be easy to copy their practice in our gardens in the United States.

The industrious Mr. Osgood, of South Salem, is gathering in his currant vintage. He will make about 1000 gallons of wine this season.—His wine has sometimes sold, at the south, for three dollars a gallon.—*Salem Gazette.*

Norridgewock, (Maine,) August 4.

COFFEE.—There are now growing, in full bloom, in gardens in this town, a number of Coffee plants. The seeds from which these plants sprang, were raised in this place, the last season, from a seed which was accidentally found among some raisins. Seventy kernels were produced from one seed, last year, perfectly ripe: and we should judge that on a plant in the garden of Mr. Manly, there will be considerably over a hundred. The coffee ripens and comes to maturity in about the same time that Indian corn does. If one plant will come to maturity and yield in this manner, why will not any quantity?

OPIUM.

This is an article of general use and of great value, and every effort has been made to encourage its manufacture in England. The London Society of Arts has awarded a premium of thirty guineas to two persons, for preparing 143 lbs. of opium, from English poppies; and the success of the experiment warrants the conclusion, that if the article can be manufactured in a climate so moist and cool, we certainly have degrees of latitude in this country promising greater success. The article of opium, which is prepared in vast quantities in India, forms a profitable item in the commercial exports of that country. The *papaver album*, or white poppy, is cultivated in great abundance over the east, and grows in every section and variety of climate, excepting on the ridges and summit of mountains. A rich strong soil is required, and the plants should be well attended, and watered daily. The process of making the opium is simple:—After the flowering is finished, and the capsules have attained full size, an incision is made in them at sunset, for three or four evenings; the milky juice, when suffered to run into vessels, soon concretes, and forms into cakes of a tough brown substance. This is opium. Chemists inform us, that it is a very compound substance, containing sulphat of lime, sulphat of potash, an oil, a resinous body, an extractive matter, gluten, mucilage, &c.

There are many plants in this country possessing narcotic qualities, but we doubt whether there are any from which the opium can be extracted of a quality equal to that from the poppy. The *sativa* or garden lettuce, yields a milky juice, from which a substance like opium can be made. The *atropa belladona*, or deadly nightshade, is a remarkably narcotic plant; the *degitalio purpurea*, or fox glove; henbane, hemlock, stramonium, &c. &c. are equally narcotic; but the medicinal value of the opium may be safely calculated upon from the poppy only.

Good Turkey opium is $8 per pound; and when we take into consideration the vast sums of money expended for that article, and for laudanum, it would justify an attempt to manufacture opium, by endeavoring to raise the poppy in several states in the union.

The dry heat of India, and the strong soil necessary for the poppy, may be found in Alabama, and some other states to the south and west.—We think the plant would thrive in Maryland and Virginia; at all events, we suggest the propriety of making the experiment in gardens and hot houses, and if the plant can be cultivated to any extent, it will be a great source of profit.

N. Y. Nat. Adv.

HYDROSTATIC PRESS.

A Hydrostatic press has recently been erected in Gardiner, (Maine) for the purpose of pressing hay for market. It was constructed by Mr. Kendall; and the forcing pump, which is of bell metal, was cast by Mr. Wing, both of Gardiner.—Mr. K. had no other information respecting the proper construction, but what was obtained from Rees' Encyclopedia. But his ingenuity has enabled him not only to construct so nice a machine, but to improve and greatly to simplify it. The operation and advantages of the press are thus described in the Hallowell Gazette.

The size of the press when the hay is first put into it is twenty-seven inches wide, by forty-two inches, and fourteen feet high. In this, the hay is first trodden down by foot, as close as possible; the follower is then forced down three feet three inches by a powerful lever, moved by a double pulley, and is firmly secured; the piston is then raised by the forcing pump eight feet two inches, which reduces the capacity of the box containing the hay to about twenty cubic feet. The hay is then bound with iron bands, made of nailrods; and is driven out of the press by a perpetual lever, working with a coggle joint, and moved by the water wheel. Wooden hoops of the best quality were tried at first for binding the hay, instead of nailrods; but they instantly broke. Only a few bundles have yet been pressed. They have weighed from six hundred and thirteen to eight hundred and fifty-four pounds according to the kind of hay that was used. An attempt was made to re-press one bundle in order to get it more compact, but as soon as the piston was lowered, it burst the iron bands, and proved that it was pressed sufficiently for practical purposes. If pressed more it would require much stronger hands; the expense of which would more than counterbalance the advantage gained by the greater compactness of the hay. When the bundles are taken out of the press, they gradually expand and stretch the bands, so that the next day, they will measure from twenty-three to twenty-six cubic feet, according to the dryness and elasticity of the hay. From several experiment it is found, that the white pine timber of this country, partly seasoned, weighs about twenty-eight and an half pounds to the cubic foot. The heaviest bundle of hay when in the press weighed forty-two and a half pounds to the cubic foot, or fifty per cent heavier then pine timber, and when expanded, thirty-four pounds to the cubic foot, or twenty-five per cent heavier than pine timber. The safety valve has yet been loaded, so as only to give a purchase of two hundred and twenty-five tons, which is not two-thirds of the power of the press. It is therefore apparent how much closer hay might be pressed, if it would pay the additional expense

The expense of the press, including the barn in which it is placed has exceeded three thousand dollars. The iron, of which great quantities were necessary to enable the press to resist the enormous pressure, forms the principal item in the expense.

In a country so peculiarly favorable to the raising of grass, hay must become a great article of export, when it can be compressed, so as completely to load a vessel without the necessity of using ballast; and when it is not liable to injury from exposure to the weather. Some persons have supposed, that the exportation of hay would injure the country, by depriving it of the manure, which would have been made, had the hay been consumed at home; but the farmer is as likely to injure his farm by raising and selling grain as hay; and when he finds a good and certain market for an article, so easily raised as hay, he will be induced to use plaster and other artificial manures, by which he may certainly double his crop; and while therefore he sells a portion of his crop, he will still retain more to be consumed on his farm, than he would have had but for the stimulus given to his exertion by the foreign demand.

E. RUCK'S Meadow Grass, or perpetual Rye-grass.

Any one desirous of laying down land for permanent grass, or for one, two, or more years, will find this grass answer the greatest expectation: it has been tried for many years, and in all parts of the kingdom, and has given great satisfaction. The price this year is 5s. per bushel, and 4s. per ten bushel bag. Will not sell less than twenty bushels: will not give more than two months credit. Any orders directed to E. Ruck, Down Ampney, near Cricklade, Wilts, will be immediately attended to.

N. B. Had orders last year for many hundred bushels that he could not supply, therefore begs those who intend having some, to apply immediately, and it might then be sent by water carriage, which is much the cheapest.

Will some one of our patriotic merchants import some of the above seed?—*Edit. Am. Far.*

The following circumstances are stated in the Discourse recently delivered at Schenectady, by the Hon. De Witt Clinton:

"At this moment, a respectable mechanic of the city of London is collecting materials for writing our history. He is favorably noticed by distinguished members of Parliament; and although his mind has not been disciplined by regular education, yet its productions display vigour and cultivated powers."

Lord Kennedy has gained his bet, (we believe of 1,500 guineas,) that he would ride 150 miles, walk ten miles, shoot forty brace of grouse, and walk ten miles back, all in twenty-four hours; which he performed in twenty-one hours; and shot forty-nine brace, being nine brace more than his number, and in three hours less time.

Monday afternoon, in the vicinity of Melksham, Spa, Mr. Charles Newcomb, of Bath, undertook, for a considerable wager, to run nine miles and a half within the hour, which, notwithstanding the dust and extreme heat, he accomplished in a masterly style 1½ minute within the time.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

Baltimore, July 7, 1823.

A report of the tobacco Inspected at and delivered from Williams & O'Donnel's Inspection Warehouse, during the quarter, commencing on the first Monday in April, in the year of eighteen hundred and twenty-three, and ending the first Monday in July, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	1123	15	35	1173
Number delivered.	1679			1679

JOSIAS STEVENSON, Inspector.

TREASURY OFFICE, ANNAPOLIS, July 15, 1823.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

Queen Anne, July 7, 1828.

A report of the tobacco inspected at and delivered from Queen Anne Inspection Warehouse, during the quarter, commencing on the eighth day of April, in the year eighteen hundred and twenty-three, and ending on the seventh day of July, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	339			339
Number delivered.	183			183

WELLS & TYLER, Inspectors.

TREASURY OFFICE, ANNAPOLIS, July 17, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

THE FARMER.

BALTIMORE, FRIDAY, AUGUST 29, 1823.

☞ There are on our files, a dozen or more of "ADDRESSES," to Agricultural Societies—to the kindness of the friends who have forwarded them, the Editor is much indebted, and he takes this occasion to solicit from his subscribers generally, the favour of being furnished with such of these productions, as may be offered or published in various parts of the United States —at the same time it is proper to explain, that in few cases can they be published *in extenso*, for reasons which, if not hitherto stated, must be obvious to all. But we shall take much pleasure, as we can get time, in overlooking and extracting for the Farmer, such parts, of which there are many in all of these addresses, as contain suggestions of a novel and generally interesting character.

ICE AND ICE HOUSES.

The editor of the American Farmer has been requested by several correspondents, to collect and communicate through his Journal, information as to the construction of Ice Houses.—The following is a copy of his letter to one of these friends, and as the subject is one of general interest, it is here inserted for the perusal of his subscribers:

On this subject there can be no doubt that the *cheapest and simplest* construction is the best.—In the philosophical transactions it is stated, that in Italy, great use is made of chaff to preserve ice—that the ice house for this purpose need only be a *deep hole*, dug in the ground on the side of a hill, from the bottom of which they can easily carry out a drain to let out the water which is separated at any time from the ice, that it may not melt and spoil the rest. If the ground is tolerably dry, they *do not line the sides with any thing, but leave them naked*, and only make a thatch roof over the top of the whole; this pit they fill either with pure snow or ice from the purest water, because in Italy they do not use ice, as we do, to set the bottles in, but really mix it with their wine. They first cover the bottom of the whole with chaff or straw, and then lay in the ice, not letting it any where touch the sides, but ramming in a large bed of chaff all the way up between the ice and the earth.—They thus carry on the filling to the top, and then cover the whole surface with chaff; and in this manner it will keep as long as is desired.—There is no doubt that even this simple plan would answer in many situations, especially where the soil is firm and dry and the situation elevated—but, on the score of simplicity and cheapness, there can be no reasonable difficulty with any farmer, who is not restrained by sluggard indolence, from enjoying, through the whole summer, one of the greatest luxuries, or rather, one of the most indispensible *comforts*, that can be imagined.—For it is well acertained, that nothing more is necessary to the preservation of abundant-ice, for all the uses of a large family, than to sink in the ground *a common log house*—such for example, as is generally built for negroes.—A simple pen of unhewed logs, ten or twelve feet square, sunk about eight or ten feet below the surface, with a taunt roof, covered with dirt, or with a *thick* straw thatching, is all sufficient. The chief object is to keep the ice *dry*, and to *exclude the sun and rain*—for this purpose, make a small pit in the centre of the bottom of the ice house, to receive the drippings from the ice, and cover it with logs and straw—or rather, the whole bottom of the house must be covered with logs and straw, before the ice is thrown in. Stuff in straw between the ice and the sides of the house as it is filled, and then a thick covering of straw over the whole—whenever ice is taken out, the straw is thrown aside, to come at it, and then thrown back again when the quantity of ice required has been obtained. This we believe, from all our enquiries and personal observation, and from all we have seen in print on the subject, is the whole secret of keeping ice—and we have been truly astonished, that so few farmers will take the trouble to procure for themselves and their families, a convenience so indispensable to comfortable living, during five months of the year—seeing that the house may be provided at little more expense than is incurred in sinking a pair of gate posts, and with no more skill than is exercised in the building of a good poultry house.—Some excuse themselves for their indolence, by saying that there is little occasion for ice, and even that the use of it is unhealthy—and yet put the pleasure of ice in their way in the month of August, and these very gentlemen will be the first to have recourse to it.—Is it no pleasure to have your milk—butter—-melons—-your cider— your liquors- -your drinking water—all kept cool by ice?—Is it no advantage to have an ice house, where lamb or veal, or other fresh meats may be kept, and *improved by keeping*, for a week—or more?

Let the gentleman of the house take his people, and in less than one week complete his ice house, and fill it with ice, and we will stipulate to pay all the expense, if the Lady of the house does not find abundant occasion for, and infinite pleasure and comfort in using the contents; and we will warrant that he will not forego the many nice things prepared by means of the ice—for fear of injuring his health—where an ice house is provided, instead of sending, as is the custom in many parts of the country, a little negro with a wooden pail a thousand times a day to the spring, and after all having your water warm and impure, let a barrel be put under the spout the night before, and placed in the ice house in the morning, and when water is wanting, a large *STONE jug or pitcher* may be filled and set in a tub of ice, in one corner of the room, and then there will be some satisfaction in drinking *pure cool water*; and less excuse or occasion to correct any ill taste, by the addition of *ardent spirits*.

To procure the ice, nothing more is necessary than a stream of water, as thick as one's wrist; select some spot, where by means of a small dam, the water may be made to overflow a *large space*, and if the pond be not more than six inches deep, you will soon have an abundant supply, according to the extent of ground covered by the water—when the ice is thrown into the house, have it, with rammers, broken tolerably fine, and finally well covered with straw—it may be well for sake of ventilation, to let the roof overjet the leaves, which may then be left open all round—suppose the pit to be dug eight or ten feet deep, the dirt thrown out will raise the body of the house two or three feet above the ground.

We have thus hastily sketched, what we know to be the simple principles for constructing ice houses, but in some early number, we may publish from some of our books, what Boardley and others have said from experience. It will be found to agree essentially with what we have stated. ☞ In the mean time, let the farmer, who would avoid the reputation of a sluggard, who deserves and likes to enjoy the cheap and essential comforts of gentlemanly living; send Ned or Dick to cut and cart in the logs; for all the materials should be on the spot before the pit is dug, and by that time, if any further information is requisite, we engage to place it in his hands.—He shall have no excuse on that head.*

☞ *Please sir hand this to the lady of the house*, that she may know at how little expense and trouble, she might treat her friends to iced-cream, and give them their strawberries† and cream, *as cold as ice.*

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* *In our ideas of* knowledge, *we profess to resemble* rich *men in their notions of* competency, *that is, that enough always means a* little more—*so we shall thank any of our readers for an essay on ICE HOUSES, and there are many who can speak experimentally.*

† *You see I take it for granted, that you keep up in your garden a succession of* beds of fine strawberries—*as I know it may be done with labour, not exceeding that of one man for two or three days in a whole year.*

◆

☞ We are frequently asked to give our private impressions about live stock, implements, machinery, &c.—It will therefore save trouble to all parties, and *time*, which to us is very precious, to state once for all, that all the information we get, which is worthy of being made known, we make publick through the Farmer; to *that* we must refer those interested, and from what is there found, every one can make up his own opinion.—It is our province to communicate *impartially*, the *pro* and the *con*; in reference to Short Horns, Herefords, Long Horns, Devons, Merinos, Dishleys, Broad Tails, Straw Cutters and Ploughs of every body's importation, make and invention, leaving others to decide on their relative merits.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7—Howard street, from wagons, $6 37½—Superfine, $6 50—fine do. $6 25—Wharf, do. $6 12½—White wheat, $1 17 to 1 20—Red do. $1 10 to $1 15—Rye, 45 cents—Corn, 41 cents—country Oats, 28 cents—Beef, 8 cents per lb.—Live Cattle, $6 to $6 50 per cwt.—-Bacon, hog round, $10—Pork, $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—-Orchard Grass do. $3—-Herds' Grass do. $3—Timothy do. $4 50—Millet, $1 50—Flax Seed, 75 to 80 cts.—Whiskey, from the wagons, 35 to 36 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl.—-No. 2, $2 37½—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 14 cts. per lb—Eggs, 10 cts. per doz.—New Hay, $14 to $15 per ton—Old do. $18—Straw, do. none.

MARYLAND TOBACCO.—Extra Fine Yellow, 28 to $35, scarce, wanted—Fine, do. 18 to $25, do. do.—Fine Spangled, 12 to $20, do. do.—Fine Red, 6 to $10—good do., 4 to 6, plenty, no demand—common, 2 to 4, do. do.—Seconds, 1½ to 2.

Sales.—6 hogsheads—5 First, and 1 Second, Extra Fine Yellow, raised by Thomas Davis, Esq., of Montgomery county, sold by the single hogshead—1 at $30½—1 at $31½—1 at $32—1 at $32½—1 at $24—1 at 12, Second.

Seed Wheat.

The Subscriber has just received upwards of 100 bushels of WHITE WHEAT, (blue stemmed,) free from garlic, &c. Having sowed some of this kind of Seed this summer, I think I can now offer the above mentioned parcel, *for sale*, as a very superior quality.

ALSO,

100 bushels of good clean Seed Rye.

100 bushels of Timothy Seed, of this year's production.

100 bushels of Orchard Grass and Garden Seeds.

On hand as usual.—A general assortment of Agricultural Implements; consisting of all kinds and sizes of Ploughs; self-feeding Straw Cutters, Superior Wheat Fans, such as were so highly recommended at the last Cattle Show in this state; Corn Shellers, and many other articles of husbandry, too numerous to mention.

Also, WOVEN WIRE.

All the above described seeds and implements, &c. will be sold on very reasonable terms, for cash. ROBERT SINCLAIR.

No. 1, Ellicott-street, Pratt-street wharf.

Printed every Friday at $4 per annum, for JOHN S. SKINNER Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

From Memoirs of the Board of Agriculture of the State of New York.

LETTER

To the Honourable Stephen Van Rensellaer, President of the Board of Agriculture, upon Sheep Husbandry, and the Cultivation and use of Turnips.

(Concluded from our last.)

These preceding observations upon sheep husbandry, will appropriately introduce some account of the cultivation of turnips, and the uses to which they ought to be put, including the method of preserving them during winter from the frost, the winters being altogether too rigorous to admit of their being left in the open ground in this part of the state. And as many persons who have received rape with other seeds from the Board of Agriculture have informed me that they succeeded perfectly in raising fine plants, yet from being unaccustomed to it, were apprehensive they had not put it to the most profitable uses, I shall, in the hope it may gratify some of the numerous persons who have applied to me, give a brief sketch of what I consider a profitable course for sheep husbandry, of which rape and turnips will form the principal articles of cultivation.

The important business of lambing being well got through with, and the grass nicely up, the sheep are taken to their summer pastures. It being supposed that these are sufficiently extensive, I shall only consider the agricultural part necessary for rape and turnips.

Fifteen acres of land will be a sufficient appropriation for a flock of five hundred sheep, and less in proportion.

Of these we will suppose five acres for rape, and ten acres for turnips, all brought into a good mellow state the preceding fall. Rape being of the cabbage kind, will do to sow very early. The ground being manured with from ten to twenty loads to the acre, well ploughed in, the rape may be sown either broadcast or in rows with a drill, or the plants may be first raised as cabbage plants are, and transplanted. A quart will sow an acre broadcast. If sown in rows, less will do, and I prefer and practice the row culture both in rape and turnips, as the land is more easily brought into a clean state. The rows eighteen inches apart will do, and the plants a foot apart. It will be found most convenient to get it in by degrees, one acre about the end of April, or as soon as the ground is dry and warm. Another in the middle of May, another at the end, and the rest in the early part of June; the latest sown of these may be fed off in time to sow winter wheat on the ground.

Rape is a remarkable oily plant, and sheep, which are sometimes rather shy of it at first, soon become voraciously fond of it, and fatten quicker than upon any other vegetable. Where the winters are sufficiently temperate, it is common to feed down the plant with sheep, and let it produce seed the next year, which is subsequently converted into rape oil.

As soon as the rape has become a stately plant, with abundance of large broad green leaves, it may be turned in upon; the first crops may be fed down with store sheep, such as aged ewes, or wethers intended to fatten and dispose of before winter; and it is considered more economical to set off a small part of the crop at a time, with hurdles or nets, and turn the sheep in, rather than to let them ramble through the whole field.

But as profitable a way as any, in which rape can be used, is, I think, that of turning the ewe lambs in, intended to keep as future breeders, as soon as ever they are weaned, and on my farm the weaning invariably takes place, early in August. This gives them that seasonable start which ensures their continual growth, and that early maturity so important in sheep husbandry. When the weaning takes place, the aged ewes which have bred that year, may be profitably turned upon rape, where they will be sure to get fat. In short, where there is plenty of rape, sheep are sure to go into the winter in excellent condition; which condition, if it is subsequently kept up with turnips, the flock is sure to pay the owner well the succeeding year. Upon ground so well manured, there need be no apprehension of the future crop if the season is favorable. If the rape is all fed off in season for sowing winter wheat, the most sanguine expectations may be entertained of a great crop; and if a spring crop is more convenient, barley may be advantageously substituted; and both with a very shallow ploughing, to keep the manure within reach of the roots of the future plants. This is merely taking a lesson from nature, whereas in the case of new land, we see heavy crops produced by the vegetable mould on the surface.

I shall close this account of rape, with observing, that plants fed down seldom survive the next winter with us, and go to seed; and as it is important always to have successive supplies of seed, I have been obliged, to ensure them, to sow a small quantity in a warm place, and not feed them at all, but let them go to seed the next year in the situation where they grew.

The remaining ten acres appropriated for turnips, may be cultivated in the following mode, which I have adhered to for many years, with uniform success. I should propose seven acres to be sown with white Norfolk turnips, of the Globe and Tankard kind, and three acres with Swedish turnips, or Ruta Baga. The white turnips begin to vegetate rapidly on the approach of spring, and are consequently pithy in the inside; they should therefore be fed off first. The Swedes keep sound into the summer months, and are in season to be profitably fed out when the whites are finished.

The ground being placed in a mellow state, should be well manured with twenty to twenty-five loads of manure, spread very evenly on the surface, covering every part of it, and ploughed in about the 12th of June. After this it is to be harrowed well down, and then ploughed into small ridges about thirty inches apart, and certainly not wider than three feet. Some persons plough the ground in this manner before manuring, and then when the manure is evenly spread on the surface, rake it into the furrows, and then convert them into ridges covering the manure. Swedish turnips exhaust a great deal of manure, and by this method it will expend further, which is an object where manure is scarce: but as I have never been pinched in that valuable article, and have looked to an evenness in the succeeding crops, I have always preferred to spread the manure before making the ridges, and to cover every part of the land to a palm of the hand with it. On the 15th of June my seeds were sown this year after these previous steps, with a drill barrow, moderately thick. As soon as the turnips were in the rough leaf, I had them separated by expert hands with hoes to about the distance of eight inches apart, killing at the same time all the weeds on the tops of the ridges. When the turnips have become well fixed again, for many must be loosened in this operation, and the sides of these ridges are covered with weeds, we introduce a small plough, and take a slice from both sides of every ridge, close to the turnips: these slices of course fall into the furrow, carrying the weeds which grew on their sides. A day or two after, in dry weather, another plough with a double mould board is introduced into the furrow, and sweeps back the mould to its place. This operation may be repeated as often as weeds appear: but if it is effectually done once, it will not be wanted again; though a repetition will do the crop no harm: the more the soil is pulverised, the more easily the fibres of the roots can multiply and extend themselves in search of food, and eventually carry more nourishment to the bulb.

About the 15th of July the white turnips may be sown, and treated in every circumstance from the beginning to the end as I have directed for the Swedes. Nothing can look more beautiful and fresh in the months of October and November, when grass is upon the decline, than fields of turnips with their ample, green and flourishing tops. Nor can any crop be more valuable than the turnips themselves. It is almost incredible the quantity which, in a favorable season, may be grown on an acre. I have within the last ten years had some crops so very productive, that I have found it difficult to persuade some of my farming friends that so many turnips could grow on an acre. Being determined upon some favorable occasion to put this to a rigorous test, I judged at the commencement of the autumn that the present season would afford me a proper opportunity. We had taken great pains with our turnip crops. Two fields of nine acres, half Swedes, half whites, had been in a most flourishing state, and would have surpassed every expectation, but for a pinching drought of four weeks, which kept them stationary. Towards autumn they revived under the rains, and accordingly I requested two gentlemen from the city of Schenectady, entirely disinterested in the matter, to do me the favor to call and make an estimate of the quantity on an acre of the respective kinds. This they were obliging enough to do, but as it was not convenient to draw them all in one day, and they had (it being the 7th of October) a month or six weeks of the best of their time to grow, they took the trouble to ascertain by themselves, in the only then practicable manner, the quantity. The certificate which they gave me, and which was read at the proceedings of our annual fair, I subjoin, as it will explain the result.

I certify, that this 7th day of October, 1822, I surveyed upon the farm of G. W. Featherstonhaugh, in Duanesburgh, two separate acres of turnips, each out of a distinct field of four and a half acres of turnips.

Signed,
JAMES FROST, *Surveyor.*

We the subscribers did upon this 7th day of October 1822, inspect upon the farm of G. W. Featherstonhaugh, one acre of Swedish turnips, and one acre of White Globe turnips, which had been this day surveyed by Mr. Frost, out of two separate turnip fields of four and a half acres each. The turnips being at the height of vegetation, and having perhaps four or six weeks to grow, the following method of computation was adopted. The number of turnips in each acre was ascertained, and turnips of various sizes drawn, weighed and averaged.

The acre of Swedish turnips had 15,925 turnips, and amounted to one thousand and ninety-six bushels.

The acre of White Globe turnips, had 16,000 turnips, and amounted to eleven hundred and forty-three bushels.

We further certify, that both the fields were a very even crop, and had withstood a severe drought. Signed,

THOMAS POWELL,
JOEL B. NOTT.

Many of the turnips weighed ten and twelve pounds, nor is this crop very extraordinary, when we remember that there are authenticated accounts of upwards of two thousand bushels being raised to the acre in Great Britain.

As it may be interesting to many to know the method adopted to secure so great a quantity of turnips, I shall relate it.

We began on the 8th of November to draw them from the ground, but as this was an operation which would have occupied all the hands on the farm, a month of fine weather, which we had no right to expect; I sent round to my neighbours who had not raised any turnips, with proposals to give them entertainment for the day, and two bushels to each man for their labour; directing them on what particular days to come. Some days we had twenty people, and some less In one week we had them all secured in the following manner: Six men were directed to take each a row, draw the turnips, strike off the long thin tap-root and the soil with it, with a knife made out of old scythes, and throw them into one row, with their bottoms to the ground, and keeping their tops as free from dirt as possible. When a sufficient quantity was drawn for the day, the parties of six men went back to their drawn rows, took up the turnips, and struck off the leafy tops into small convenient heaps, dropping the bulbs on the ground, which were taken up and carried in carts and sleds to cellars near the sheep-folds, containing about five hundred bushels each. When these were full, long square pits were prepared on dry knolls in the fields, about a foot deep, and the turnips piled up in each to the number perhaps of three hundred bushels. Straw was put over them, and subsequently a foot deep of earth, making this covering somewhat thicker to the northwest. This by experience I know to be a sufficient covering, having taken them out perfectly sound in the month of May. The tops were fed out constantly to the horned cattle as long as they lasted. The handsomest turnips with the smallest necks and tops were selected for seed without cutting the roots, and only a part of the tops, and then secured by themselves. These are planted out in dry, mellow and rich ground, on the first opening of the spring, a foot apart, and hoed and kept perfectly clean. The seed when ripe is gathered early in the morning, whilst the dew is on the pods, and before they split open. I have preferred to give this detailed account of the cultivation and preservation of this valuable root, that persons who choose to follow my method, may not, in the event of failure, lay the blame upon the description's being too general, as is frequently done. To ensure perfect success, one part of the process is as essential as the other; and negligence in any stage of it is almost fatal: if at the beginning, they won't grow: if at the end, they will all be lost. We begin to use them immediately, feeding them amply to fattening cattle, and to the calves raised the same season. Cattle fatten rapidly upon them, and make better beef than upon oil-cake, it being usually rather rancid when made upon this last article. And calves which are easily taught to eat them, by tempting them with small pieces at first, soon become very fond of them; and if fed abundantly with them, will hold their condition, and continue to grow the whole winter, which ensures the desirable point of early maturity. Turnips also are a very convenient food to give to animals during the winter months in another point of view, as they scarce ever wish to drink, if they have plenty of turnips. Cows, if kept in doors the whole winter on turnips, will never want water. The Swedish turnips are so sweet and nourishing, that horses will live upon them, and store hogs will want nothing else.

But the especial use for which such large quantities are destined, is the sheep yards during the winter months. This feeding time will average, where I reside, 135 days.

These yards being all comfortably arranged, and protected sufficiently from storms, with ample sheds for the sheep to sleep under, and the haystacks and the turnip-cellars conveniently at hand, the breeding ewes and ewe lambs are divided into companies of not exceeding 150, and reduced in number when the former begin to grow heavy. Turnips are fed abundantly out to them in the yards every day, whole, which is no inconvenience to strong young sheep that have got all their teeth. In consequence of the sheep being kept in this fine condition, I am enabled to commence my lambing towards the end of February, which continues perhaps for a month. The ewes have abundance of milk, and raise their lambs as well as if they were dropped in May. The start which the lambs thus get is an advantage to them for life. When common lambs dropped in May, are saleable to the butcher, weighing perhaps 6 lbs. the quarter, the others will weigh from 10 to 15 lbs. and are become heavy sheep, whilst the others are getting a protracted growth. The consequence is particularly obvious with the ewe lambs, which, when 18 months forward, are stately animals, in the best condition for breeding. A general opinion prevails that it is very hazardous to have great numbers of lambs dropped so very early. We do not consider it so. Ewes kept so comfortable, and in such high condition, have plenty of milk and bring strong lambs. It is true, an essential part of the system is, to have a shepherd with an assistant during the lambing time, alternately up every night to assist those which are in any difficulty, particularly ewes with their first lamb. When the nose of the lamb is well out with the fore feet, they frequently struggle in this situation until exhausted, and the lamb is lost. On this account 25 per cent. loss is usually allowed with young sheep in estimates, about lambing: but a well brought up shepherd does his duty cheerfully, by night as well as by day; and when he perceives a ewe in that critical situation, lays her with care on her back, extricates gently one leg to the full extent, then the other; and taking both in one hand, draws the lamb steadily out, and lays it before its dam. By pursuing precisely every circumstance as I have here stated it, connected with the sheep, from the setting in of the winter through the lambing time, I was so fortunate as only to lose six lambs out of 236 young ewes of my Dishley and Merino breed this last lambing time.

The same attention in regard to feeding is paid to the ewe lambs, from the setting in of the winter. They have the finest young clover hay, cut when in blossom, given to them, and as many turnips as they will eat. The other yards containing the rams, the fattening wethers, and wether lambs, are all served with abundance of food. The most essential part of the whole of this system is to give them as much as they will eat.

How great the difference to individuals as well as to the country, betwixt a careful husbandry of this sort, and the usual practice prevailing all over the state with the common sheep of the country, facts speak loudly enough On the one hand a flock of 100 sheep will bring at shearing time, 700 lbs. of wool to market, and the sheep in such condition, that if fodder is scarce, or the owner wishes to part with them, they are all good mutton, and promptly saleable at the highest prices.

On the other hand, a flock of 100 common sheep will perhaps bring 250 lbs. of wool to market; and if fodder is scarce, and consequently dear, the owner must either expend more money to keep them during the winter, than they will be worth in the spring, or sell them in the fall for what they will fetch, at perhaps a dollar a head.

Besides all the other great considerations, connected with the substantial improvement in husbandry, and every other branch of a farmer's care, which belongs to a good system. The consequent prosperity of individuals—the increased wealth and power of the country, and the inestimable satisfaction of having things done as they ought to be done.

In offering these imperfect observations to the public, it has been by no means my intention to discourage the breeding of pure Merino sheep. I am satisfied they do not degenerate here. The main difference which I have endeavoured to shew betwixt them and the mixed Dishley and Merino is, that to farmers who reside within the reach of the great markets of the state, they are not the sheep "that will raise the most money in the shortest time;" and this ought to be number one of every farmer's considerations. But if I resided in a very remote part of the state, where there was no market for carcass, I would confine my cares to Merinos, and would bend all my attention to improving their fleeces, both as to weight and fineness. For the Merino sheep have a great intrinsic value in such a situation, and will, I think, be more profitable than any other branch of husbandry.

The time appears to be approaching, when this frugal and wise government may be induced somewhat to change its policy. A constant surplus of revenue will open a safe road to the gradual encouragement of manufactures in wool, and which the increasing wealth and skill of the country seems to call for. A moderate aid to manufactures would probably produce great effects. A prompt home market for wool would be created: a great *impulse would be given to sheep husbandry, and to the inseparable improvements in agriculture. There would be a steady demand for the finest as well as the coarsest wools, and the agriculturist would soon become independent and contented in every part of the state, wherein is comprehended every blessing that wise men desire.

At the conclusion of this letter, permit me to say, that if in thus freely imparting the result of my experience, I should be so unfortunate as to draw forth unfriendly observations, that I have been governed by considerations of self-interest, in speaking so highly of a breed of sheep brought forwards by myself; I must rest my justification with liberal minds, who have fairly examined the whole scope of the subject. If I have rendered it sufficiently plausible to attract public attention still more to the breed, at least I have enabled others to enter into competition with me, and have only thus reserved to myself that share of prosperity which is to arise from my own exertions. I desire nothing more; convinced that individual as well as public interest is best promoted by a spirited competition for excellence in every thing. I am assured however that you will give a proper interpretation to my motives, and have a true satisfaction in subscribing myself,

Sir,
Your faithful ob't servant,
G. W. FEATHERSTONHAUGH.

Duanesburg, State of New-York, Nov. 1822.

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* *The state of New-York does not clip perhaps more than three million pounds of wool. Some of the counties in England clip* 20 *millions of pounds. An encouragement to manufactures would, I think, in ten years enable this state annually to clip* 50 *million of pounds.*

COMMUNICATED FOR INSERTION IN THE AMERICAN FARMER.

Report of the Committee, appointed by the South Carolina Agricultural Society, to consider what beneficial effects would result to the Agricultural interests of the State, by importing Foreign Seeds, Plants and Implements of Husbandry.

The Committee, appointed to consider what beneficial effects would result to the Agricultural interests of the State, by importing FOREIGN SEEDS, PLANTS AND IMPLEMENTS OF HUSBANDRY:—

REPORT, that, in their opinion, the situation and circumstances of the Agricultural concerns of the State, render it very probable, that the introduction of foreign seeds and plants, judiciously selected, may prove highly advantageous: for, when we reflect, that the sources of our Agricultural prosperity, as it relates to our exports, are the result of the importation of foreign seeds, an inference may be fairly drawn, that a continuance of the practice will prove beneficial.—When our fore-fathers emigrated to this country, they found it inhabited by nations of hunters, who, subsisting by the chase, paid little attention to Agriculture: and, it is believed, that Maize is the only vegetable production of great value which they found established here. They had emigrated from a country, whose climate, unfortunately, differed so materially from that of their new abode, that the seeds and culture adapted to the former, could not succeed in the latter; and it is probable, that had it not been for the invaluable article of Maize, they could not have subsisted. The efforts of infant colonies, must, necessarily, at first, be confined, merely to subsistence; but this toilsome condition may fairly be presumed to have been prolonged in this country, by the want of an early supply of seeds adapted to the climate: for it was nearly thirty years from the first settlement of Charleston, before we find any considerable exportation of the produce of the fields. Fortunately, about the close of the seventeeth century, a small quantity of Seed Rice, (said to have been intended as food for the sea stock of a vessel from Africa,) was landed in Charleston; this was successfully cultivated, and within a few years, the export of Rice had reached to an important amount. It is also worthy of remark that we owe, not only the original acquisition of this valuable staple to the importation of the seed, but the improved variety of it, now generally cultivated, is derived from the same source; it being understood that the late Col. Henry Laurens imported a small quantity of what is called the Gold-seed Rice, soon after the revolutionary war, which was found to be so far superior to the white-hulled Rice before cultivated, that the latter is now scarely to be met with. The culture of the Indigo plant, which for many years proved a fund of great riches to the State, was introduced by similar means: A lady, who was a native of the West Indies, married in this State, having observed the advantages derived from this plant in her native country, imported thence a small quantity of the seed, and distributed it by the thimble full to persons willing to attempt its establishment here. In a few years a great proportion of the fields in the middle and lower sections of our country were covered with Indigo.

The still more valuable staple of Cotton, is also of foreign origin; some of it was introduced and used for domestic purposes, anterior to our Revolution; but the improved varieties, such as the Sea-Island, the Mexican, &c. are derived from the intelligent enterprise of individuals, who imported their seed: but, to whom we are thus indebted, your Committee are not certainly informed. Considering, then, how considerable a portion of mankind is clothed and nourished by our *two great staple commodities*, it can scarcely be doubted that they may be improved by well directed efforts to obtain the best seed from congenial climates. For, though it may be admitted, that our Cotton is already superior to most of what is carried to the European market, still, it is probable, that in the widely extended regions which furnish their principle clothing to such an immense population, some species of the plant may exist, which would prove a valuable addition to our present stock, but which is now prevented from entering into competition with ours, by the dearth of Agricultural skill, the want of proper machines for preparing it for market; the absence of commercial enterprise to find a vent for it; or impolitic regulations of government, discouraging its culture or its export.

The same may be observed with respect to Rice. It is upon the Journals of this Society, that some years ago, seventy different sorts of rice, cultivated in the Ladrone Islands, were brought from Manilla, by an English vessel, and presented to the Society by Mr. H. M. Bird, of London: the parcel was but small, and a few grains only of each sort could be distributed to the members, unfortunately none of them germinated, probably occasioned by its being too old: for, it is a remarkable property in Rice, that, although, almost imperishable as food, and though growing freely after being deeply buried many years in the ground, yet, when exposed to the influence of the atmosphere, its germinating quality can scarcely be preserved beyond the year. A list of the different sorts of Rice from Manilla, describing the qualities of each, accompanied the above mentioned parcel; but though only about seventy sorts reached the Society, the list gave an account of no less than one hundred and ten. It can, therefore, be scarcely doubted that of so great a number, some of them may possess qualities which would make them valuable additions to this branch of our culture.

If then, sufficient reasons have been adduced, founded principally on the experience of this country, to prove that the introduction of *foreign seeds* may occasion some improvement in our present staple commodities, a similar course of reasoning will show that the introduction of *new objects of culture* may likewise much benefit our rural concerns: for, it is certain that the change from wheat and the other grains of the North of Europe, which our ancestors brought with them, to the culture of Rice, first made us an Agricultural exporting country; and the adoption of Cotton instead of Indigo, no longer profitable, saved a numerous and respectable class of our citizens from ruin, and diffused riches into every section of the State. And do not the late low prices for the products of our land; the disease to which the most valuable of them has lately been subject; and the danger of its production greatly exceeding the demand, point to the propriety of endeavouring in time, to provide, a *succedaneum* should it unfortunately fail.

It is also fairly to be presumed, that by this measure, valuable additions may be made of roots and grain, to our present stock of articles, cultivated as provisions and merely for domestic consumption.

Your Committee, therefore, having investigated the situation of the funds of the society, recommend the following Resolutions:

1. That the sum of two hundred dollars be annually appropriated to the *purchase and importation of foreign seeds and plants.*

2. That a Committee to consist of *three* members, be appointed; to be denominated the *Importing Committee;* whose business it shall be to import such seeds and plants as may be designated by the Society, or, for want of such direction, as they may deem calculated to improve the Agricultural interests of the State: and that, for this purpose, they shall correspond with the Consuls of the United States, and such other persons as they may think proper, in countries not differing in a considerable degree in climate and situation from our own, where valuable articles are the product of the soil. And, as your Committee have observed, with pleasure and with pride, that the officers of our Navy, not confining their patriotic exertions, to elevating the glory of our country and protecting its commerce and its coasts, have, with intelligent zeal added to its Agricultural prosperity, by the introduction of various valuable animals and plants; it is recommended, that the Importing Committee should, through the proper channel, communicate to the Naval Department, the views of the Society; respectfully soliciting their aid in carrying them into effect. It is likewise recommended that the Committee shall select from the publications containing them, or obtain elsewhere, the best *mode of packing and preserving the Seed*, a copy whereof shall accompany the orders for their importation; directing, in general, that they shall be forwarded so as to arrive in this country, and be sown, within a twelvemonth from the time, when they were gathered; but where this cannot be effected, advising the most efficient mode to be adopted for their preservation, particularly in guarding them against the influence of the atmosphere.

It is also important, that, with the Seeds or Plants which they may obtain, the Committee should endeavour to procure accounts of the mode of culture and soil best adapted to them, and information of the time they occupy in coming to maturity. And, as we cannot rely on an exemption of more than eight months from frost, it is deemed advisable that no annuals liable to be injured thereby, should be imported, provided it requires more than that period to arrive at maturity.

3. That the Seed, when imported, shall be distributed *gratis* to the members of the Society, and portions of it presented to our sister Societies in the State, and to any other individual to whose skill and intelligence the Society may wish to intrust them; requesting, in all cases, that the result of their trial shall be communicated to the Society.

Your Committee, being informed of the approaching departure from the State, of a fellow-citizen, distinguished by his patriotic exertions to improve our internal resources; so extensive a traveller, and endowed with such useful acquirements, that, to liberate his countrymen, captured among the inhabitants of Chili, he availed himself of the military science, which he had studied in a campaign against their antipodes, the Persians; and, believing that it would accord with the views of the Society to obtain such information, as he could impart, application was made to him for this purpose; the result of his enlightened observations was cheerfully communicated, and is herewith presented to the Society.

Your Committee have also deliberated on the propriety of importing *Instruments of Agriculture;* but they are of opinion that it would be far beyond the resources of the Society to import them for distribution, even among the members of the Society, and that it is not important to introduce them as models, because various recent and accessible publications, and particularly that valuable work the *American Farmer*, contains drawings and descriptions of all modern improvements which deserve notice.

They, therefore, recommend that this subject be referred to the *Committee on Premiums* to consider of the propriety of encouraging thereby, the introduction and use of the best *Implements of Husbandry.*

THOMAS PINCKNEY,
JOHN D. LEGAKE,
ELIAS HORRY, *Committee.*
NATHANIEL HEYWARD,
CHARLES E. ROWAND.

Charleston, July 15th, 1823.

LETTER.

CHARLESTON, 1st July, 1823.

DEAR SIR,

I have this instant received your letter of the 30th ult. informing me of the Resolutions, adopted by the *Agricultural Society*, at their last meeting.

My attention has not been very much turned to the subject of Agriculture, but it will afford me great satisfaction to promote the views of the Society, by imparting to you the limited information I possess, on the subject of the Plants, which might be introduced into this state. Many useful plants have been introduced into Europe from New-Zealand, among them is the *Phormeum Tenax*, which has been successfully cultivated in the South of France; a few of the plants were sent to me, and I believe Noisette has succeeded in rearing them. The fibre is nearly as fine as the ordinary flax, and nearly as long as that of hemp. An attempt is now making by the Commissioners of our Navy, to substitute the use of flax for that of hemp for the sails of our ships of war, as being more durable and much lighter than Russia sail cloth; for this purpose, the manufacture of New-Zealand Flax would answer admirably; it succeeds in low, rich grounds, and might be cultivated in rice swamps.

When last in France, in 1821, I saw all the oleaginous grains cultivated very extensively, and was informed that it was the most profitable branch of Agriculture. The seeds there used, are the *poppy* and *colzat*. The oil of these seeds when perfectly fresh, is used as a mean substitute for olive oil: and the *colzat* and *poppy oil*, are preferred for burning in house lamps, as being more pure and inodorous than fish oil These oils are sold at the low price of five francs a gallon. It has appeared to me, that the Planters, who have attempted to make oils from the *Sesame* and *Palmæ Christi*, have failed, because they did not cultivate it in such quantities, as to be able to sell the oils wholesale, at a cheap rate, for burning. That the *Olive* will thrive here is very generally known: This tree will succeed best on our own Sea-Islands: If any member of the Society wishes to try the experiment on a large scale, he may import shoots from France at an expense of about $10, a thousand. The *Agave Americana*, or the *American Aloes* would thrive in South-Carolina. They are long in coming to maturity, but in Mexico, a plantation of these plants, when in maturity, yield $150 the acre per annum. Our people would not drink the pulque, but the juice of the *Agave* yields a great deal of spirit, much more than any other plant: an acre of the *Agave* will give more ardent spirits than an acre of Corn.

About four years ago I received a root of *Scotch grass* from Jamaica, which, although not quite so valuable a grass, within the tropics, as the *Guinea grass*, is much better adapted to the climate of South-Carolina. Every one who has tried the experiment, must be aware of the great difficulty of propagating the *Guinea grass*. Our summers are not long enough to allow the plant to attain maturity and to seed, and our winters are so severe as to kill the roots of this delicate grass. The *Scotch grass* does not seed in this climate, but the roots resist our frosts, and it puts out in the Spring very vigorously. It attains the height of five feet, and is very succulent; cattle and horses are very fond of it. It will flourish in lands a little salt, and the late high spring tides, have been over some of the plants, in my garden without injuring them in the least. The Committee are welcome to roots and cuttings of this useful grass.

The number of trees, which would thrive in our mild climate is very great. Those which occur to me, are, 1st, The *Cork Tree:* Acorns may be brought from Portugal: The best method to preserve them, is to envelope them in green moss, shaven from the earth, and put up moist.

2d. The *Quercus Bellota*, from Portugal: Th acorn is four times the size of that of an ordinary oak, and is eaten by the Portuguese: the taste somewhat like that of the chesnut.

3d. The *Pinus Pinea;* the nuts are very large and sweet, and the tree ornamental.

4th. The *Pistachio;* a delicious nut.

5th. The *Jujuba;* a beautiful tree of Syria, bearing a pleasant fruit.

6th. The *Rhammus Lotus*, of Barbary; another kind of *Jujuba.*

7th. *Cratægus Azarolus*, two varieties; with white and red fruit; it is one of the most delicious fruits, when perfectly ripe of the size of a pigeon's egg.

8th. *Ceratonia Siliqua;* a large and beautiful tree of the South of Europe, which grows well in a sandy soil; its fruit always abundant; is good aliment for cattle and cows. This plant is cultivated extensively in Spain and Portugal.—Being polygamous, a male branch is engrafted on a female tree, and the male ones are extirpated when numerous. The timber is excellent. This tree may be raised for seed, and would be a real acquisition to South-Carolina.

9th. The *Chinese Persimmon;* a very good fruit.

10th. The *Euphoria Litchi;* the favorite fruit of the Chinese. The seed may be had from Canton.

11th. The *Euphoria Longan;* another species of the same genus; both are large trees, and in China are called *Litchi* and *Longan.*

12th. The *Arbutus Unedo*, from the South of Europe.

13. The *Arbutus Andrachne*, is a native of Greece: both very beautiful evergreen trees, very showy in blossom and in fruit.

14th. *Agalophythem Ravensaca;* one of the most aromatic and beautiful trees of East Africa, now become common in the Isle of France.

15th. The *Schinus*, a beautiful evergreen; the leaves and berries are highly aromatic, and are used by the Mexicans as a condiment with their food. The seed of this tree has been brought from the Table land of Mexico.

16th. The *Fraxinus Ornus*, of Italy; a tall tree bearing the blossom of the *Chionanthus;* the *Manna*, used in medicine, is furnished by making incisions in the bark of this tree. It thrives in Paris, and would flourish very well here; it may be procured from France, where it is called *Frere a fleurs.*

17th. You could procure from England, the *Arundo Arinaria*, to cover and keep together the loose sands on the sea coast.

18th. The *Trapa Natans*, a beautiful plant of the fresh water swamps; the fruit is not bad, and is sold in the markets in France, where it is called the *Chataigne d'eau.* The plant is there called *Maue.*

19th. We could procure from Naples a very great variety of *Figs*, superior to ours.

20th. The *Sweet Lime* and *Sweet Lemmon* of Portugal, are pleasant and wholesome fruits, and would probably thrive here.

21st. *Machrophylla Japoneca*, an excellent fruit; thrives in France.

I am indebted to Mr. Correa de Serra, former Minister for Portugal to the United States, for the knowledge of some of these plants.

I send herewith some *Cotton seed* from the Isle of France, which I lately received from the Secretary of War. As the season is so far advanced, permit me to suggest the propriety of raising some plants, in a hot house, in order to preserve the seed, Noisette would undertake to do it. You are aware, I presume, that all the Chinese and Japan plants thrive perfectly well in this climate. The tea plants might all be cultivated here, but the labour of harvesting and of preparing the leaves is very great.

It will afford me great pleasure to give you any further information you may require, in relation to the manner of procuring these plants and seed.

I am, very respectfully,
Dear sir,
Your obedient servant,
J. R. POINSETT.

At a meeting of the Society, July 15th, 1823, the foregoing Report was agreed to, and the following Resolutions passed:

Resolved, That the thanks of the Society be presented to the Hon. J. R. POINSETT, for the information politely communicated by him.

Resolved, That a Committee of three members be appointed, to be denominated the Importing Committee; and that it consist of ELIAS HORRY, THOMAS H. DEAS, and FRANCIS D. QUASH.

Extract from the Minutes,
CHARLES E. ROWAND.
Secretary to the South-Carolina Agricultural Society.

* * *

From Bordley's Husbandry and Rural Affairs.

ICE HOUSES.

Ice is applicable to economical purposes in hot weather, especially in country families.*

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* "*I never was in better spirits than here in* "*this hot country (Sicily.) I believe the quantities of ice we eat, in ices, contribute to it; for I* "*find, in a very violent heat there is no such cordial to the spirits as ice, or a draught of iced* "*water. Its cold* braces *the stomach, and gives* "*a new* tone to the fibres. *I knew an English* "*lady, at Nice, soon cured of a threatening consumption, by a free indulgence in the use of* "*ices*"—*Probably attended with internal* bleeding; *which it is said cucumbers*, cold *in their nature, have cured.* "*It is the common practice* "*here, Sicily, to give quantities of ice waters to* "*drink in inflammatory fevers.*" BRYDONE.—*But great caution is to be observed that it be not drunk when you are* warmed *at all by any kind of motion: much less when you are in a* heat *from exercise.*

"*The custom in Sicily and Italy of taking ice,* "*is considered as a powerful remedy in many diseases. The physicians of these countries do not* "*give many medicines; but frequently prescribe*

In 1771, I built an ice-house in the peninsula of Chesapeak, where the ground is flat and the surface only seventeen feet above the high water mark of a salt water river, and 80 yards from it. It was constructed with great care to prevent entrance of air, according to the then universal practice; and it was filled with 1700 solid feet of ice, the pit being 12 feet square and 12 feet deep; but it failed of keeping the ice till summer, because of its moisture and closeness. When the pit was dug it shewed some appearance of moisture near the bottom: the least moisture is too much for an ice-house. Moisture at the sides or bottom of an ice-pit, is raised to the inside surface of the dome by a heat which, in the deepest pits that can be dug, is much above the freezing degree, and if the pit be close it recoils on the ice for want of a vent. If the close pit is not frequently opened it becomes very warm, and the ice is soft and pappy at the top. The deepest and coolest pits are about twenty degrees warmer than the freezing point: so that no depth of a pit can preserve ice from melting. It is from a greediness for depth that we too often meet with *damp* earth.

Some years afterwards, I made another ice-house, 150 yards from the above mentioned, on the principles and in the manner following: *vent* was an essential object; and *dryness* with *coolness* led me to the design of insulating the mass with a bed of straw surrounding a pen of logs which was to contain the ice. The pit was dug on a spot open to wind and sun, for the sake of dryness. It was 9 feet deep. Within it was the pen of logs, of that depth, and 9 feet square in the clear. It contained but a little more than 700 solid feet—only half the quantity stored in common ice-pits. A house was over the whole; rather for excluding rain than air. The sides of the house were 5 or 6 feet high. The eaves were boarded up, but not close, and the principal vent was at the top of a pavilion roof.

Straw is a considerable resister or non-conductor of heat. Let it be clean, sound and dry; and lay it close between the logs and bank, with an abundance of it upon the ice. The small mass of ice stored in the above insulated pen, 700 feet, was daily used of very freely, and lasted near as long as double the quantity stored in a close ice-pit as commonly constructed, and which is on the hill in Union street, Philadelphia; the earth whereof is dry and gravelly, from near the surface down to the bottom.

In plate V. is a section of this insulated ice-pit. The pen or cell inside of the logs, is 11 feet square, 11 feet deep, whereof 5½ are under ground and 5½ above ground, and it contains 1330 solid feet. The space between the logs and the bank, at bottom is near one foot; the same at top is about 2 or 2½ feet. The sink for receiving water from the melting ice need be only 5 or 6 inches deep if it be good ground, and 8 or 9 feet square. Logs are laid across it. An ice-pit of 1300 solid feet, if insulated as above, I believe would keep more ice than any private family could want; supposing the pit is not deep, and the ground is dry. If 1300 feet of ice should not be sufficient, in another year heap upon it a foot more in thickness; and so foot upon foot, as may be requisite. These additions are above ground. Ice, in ice-houses, melts more at the bottom and sides than on the top; unless it may be otherwise in very close pits seldom opened. A pen of eleven feet cube, requires a house over it of only eleven or twelve feet square.

The winds most injurious to ice are from the *south* to the *east*. The door being on the *north* side, needs no passage. Rats are to be guarded against. The eaves are to be closed against them: but openings may be left on the north side, at the eaves, for admitting the steam to pass out, there as well as at the common vent on the top of the roof. These openings may be from lattice work in wood or wire: or a plank may be projected below the opening, and beyond the reach of rats.

All the building materials are to be on the spot, ready to be put up as soon as the pit is dug, lest rain damage the pit before the house can be covered.

Pound the ice small, and prefer to store it in keen weather. In *such weather* a neighbour dashed water on his pounded ice, a pailful or two to each cart load, as soon as it was stored and pounded, load by load: and he informed me it answered well, in closing and cementing the mass.

Ice-houses are to be left open some time, till *dry*, before filling them with ice. When the house is to be charged with ice, first lay *small faggots* on the grate; and on these *reeds*, rather than straw, as is common. Corn or maize stalks are very spongy, and holding water seem improper. The *thinner the ice*, the easier it is *broken to powder;* and the smaller it is broke, the better it will unite into a close mass.—*Rum* the ice close as possible in its place. Count Stolberg, says, in Sicily they prefer *snow*, as it is more easily preserved than ice. The snow is closely packed together, and covered with straw.*

FOR THE AMERICAN FARMER.

CHEAT,

Or as it is called in the Eastern States, CHESS.

MR. SKINNER,

Sir—I have been much puzzled by reading several publications in the American Farmer, on the subject of the production of *cheat;* and as to its origin, whether it was produced from seed of its own species, or a metamorphose of *wheat* into a weed called *cheat*, owing to some unknown cause, either from unfavourable seasons for the cultivation of wheat, or from a bad location, as to soil, &c. Now Sir, what puzzled me was my total ignorance as to what is called *cheat* in Maryland, having never heard of such a weed amongst the wheat, or other crops of grain, in New England, or in the state of New York or New Jersey, in all of which States and country I have been long acquainted. But from the last American Farmer, a plan is proposed for ascertaining the origin of this same cheat, from which I am led to suppose it is the same troublesome weed, that in the parts of the country above alluded to, is known as *chess*, often growing amongst *wheat*, and in fact, other winter crops—now sir, I claim to know something of this troublesome weed, so frequently seen growing amongst our wheat. I also know, that the generally received opinion, respecting its origin is, that where clean seed wheat is sown on land liable to be *winter killed*, as it is termed by farmers, from hard frosts in February and March, when there is not snow to cover the ground and protect the wheat plants, that an abundance of chess is found growing with the wheat. This also takes place, where water is suffered to pond and remain on low parts of a wheat field, for want of regular drains to carry off the water, and the wheat is thus injured and many of the plants killed; yet in such unfavourable spots *chess* is seen to grow and flourish. Besides this supposed origin of chess, from unfavourable seasons, &c. I have observed it growing on newly drained land, where no crop of any kind was ever before put into the ground; and that in such quantities, as could not be supposed to arise from foul seed wheat, but from some other cause, such as a too wet or cold season, that destroyed the wheat plants. How these should turn wheat into chess, I have no pretensions of deciding. As to chess when produced, I am confident, that it will from its seeds reproduce chess, the same as any other weed—chess grows up with a slender hard stalk, and with a *bushy* head, not unlike *orchard grass*, and about as tall, the seed is long and slender, more like *oats* than wheat; from this imperfect description, your farmers will easily know whether your cheat and our chess is the same weed. A farmer who does not sow more than 20 or 30 acres of wheat, may easily clean his field of this pernicious weed, by passing through the field, and pulling up all the chess or cheat, before the seed is sufficiently ripe to vegetate; but those who sow fields too large for that experiment, may always clean their seed wheat by *washing* it in clean water—the chess will swim on the surface, with any light grains of wheat, and are easily separated from the heavy grains of wheat—by this means all light grains as well as smutty wheat is got rid of.

If you deem this of any information or use to your farmers, you are at liberty to publish it *in whole, or such part*, as you deem worthy of being communicated.

Your friend, B. C.

Essex County, N. J.

TO THE EDITOR OF THE AMERICAN FARMER.

MEADOW GRASS,

OR PERPETUAL RYE-GRASS—LOLLIUM PERENNE
— PERENNIAL RAY-GRASS.

Mr. J. S. Skinner,

SIR—In reply to your question in the American Farmer of yesterday.

"Will some of our patriotic merchants, import some of the above seed?"

I beg leave to inform you that I have transmitted an order to Great Britain, for a small parcel of it for my own use, and should be very happy to procure any quantity for your friends, the price of which I find from the cost of some I imported last spring, would be about $3 per bushel, all charges at Baltimore. On the score of quality, I can speak confidently—I sowed down a grass plat with ray-grass, and Dutch white clover, in preference to sodding it, and in less than a week, it was up and covered the ground—in June it was apparently quite burnt out, being as brown as a

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"*a severe regimen; and prevent the baneful ef-*
"*fects of various diseases, by suffering the sick,*
"*for several days, to take nothing but water cool-*
"*ed by ice, sweet oranges, and iced fruits.*"

STOLBERG.

* *January* 1797. *Viewed the ice house at the tavern, on Gloster point near Philadelphia.—It is built within a few steps on the north side of the tavern, and near the margin of a drained low meadow of some miles extent, and of the river Delaware; but a few feet higher than the meadow and river. It was dug* 5 *feet deep (seemingly* 3 *feet too deep.) Then filled up* 2 *feet with logs. and straw upon them; leaving* 3 *feet of ice under ground; and about* 6 *feet above ground, the ice inclosed in straw; which also is a lining to the house of slabs, covered with a slight roof of slabs. It was then full of ice, in pieces the size of small apples. Sixty-one loads of a one horse cart filled it. In the year preceding* 27 *such loads supplied the tavern with ice till some time of August.*

gravel walk, but the first rain revived it, and it now most luxuriant.

I had been told that it would not do well in the United States, but am very agreeably disappointed. In England it is esteemed as a highly valuable grass, and is a very favorite sheep pasture.—The hay is selected in preference for hunters and race horses, for which purpose it is sown without the admixture of other seeds; but usually it is sown down with clover or trefoil, under a spring grain crop, and it has the good quality of being ready to cut as early as red clover, and requires only, that diligence should be used in getting it together when mown for hay. It exceeds cocksfoot in many of its qualities, and is exceeded by it only, in the latter preserving a strong growth during even severe droughts. But let the ray-grass be ever so much burnt, the first rain revives its luxuriance and beauty.

I imported also the last spring, for myself and a few friends, a selection of turnip seeds, of which the following sorts are, I believe, not much known here. They were procured for me from some of the celebrated agriculturists in the neighbourhood of Aberdeen, in Scotland, viz:—Golden yellow, an excellent table sort—green top yellow, most highly spoken of—red top Swedes, an improvement on the ruta baga. I have sown of each, the latter about the middle of July, and they now show great promise indeed. Of these sorts I shall be able to spare a small supply, as I have sent also for an additional quantity.

In regard to hedging, I think the Virginia thorn will have no comparison with the English, in point of toughness and durability—I have them both, raised by myself from seed. Of the English I imported the haws. I also raised crabs from the pumice of the cyder press, and from the present appearances I think that the crabs will be superior to any thorn, both in ease of raising, and thickness, strength, and durability of the fence. It is in the power of any man, who has a cyder press, to raise in a very few years, live fencing enough for his farm; and all that is required, when the hedge is planted out, is to be careful to keep it clean and very free from weeds, or the labor is lost. But what can we raise well without labor and attention? and what more desirable, or more ornamental to a farm, than good live fences, in preference to dead rail, requiring eternal expense and labor?

I remain sir,
Your very obedient servant,
ROBERT BARNARD.

Normanstone, near George Town, D. C.
August 30, 1823.

HORTICULTURAL.

TO THE EDITOR OF THE AMERICAN FARMER.

STRAWBERRIES.

Sharon, Bucks County, Pa.
August 28, 1823.

Dear Sir,

In your valuable paper, twentieth number of the volume now publishing, some inquiries are made as to the best mode of cultivating the Strawberry plant; and I have thought, that the most direct or effectual way of getting at the subject, is, for each individual concerned to give in his stock of information—and therefore it is that I tender you mine, however little it may add to the general capital.

I have succeeded pretty well in raising several species of the strawberry, and have tried different modes of cultivation—those planted in rows eighteen inches apart, and twelve inches in the rows, did very well; but from my experience, (which I confess is limited to a few years,) I conclude, that the proper management is, to plant in a very rich soil, in rows two and a half to three feet asunder, and from three to six inches apart in the rows according to the quantity of plants at hand—suffer the plants to close in the rows, and to increase in width about one foot; or the ground may be laid out in beds twelve inches wide and two feet asunder—and where there is a sufficient supply of plants, the whole ground allotted for the vines, may at once be occupied, by setting three rows in each bed, six inches apart, and the same distance in the rows; but I prefer the former plan, because the vines can be more easily kept clean during the first season, so as to leave nothing to interrupt their future growth. After the first year, the spaces left between the beds should be kept covered with straw, in order to preserve the fruit perfectly clean, and cause a more abundant yield; and it will ensure a moisture far beyond what grass or weeds can do. When the beds become properly filled, the plants will be too close set to admit of straw being intermixed among them with convenience, except in a short or cut state—but those who will take the trouble will be amply rewarded, and if well done, it will answer the purpose of manure which is annually required to produce a good crop of fine fruit. The ground should be kept clear of all trash, but the plants ought not to be disturbed during their bloom or fruiting. I suffer the runners to continue until the next spring, but give a good dressing as early in the season as practicable; (perhaps late in Autumn would do equally well, or better) trimming to the width above mentioned; and if the plants should appear too thick, I take out such as are old, or in a weak and declining state. Some persons plant in borders, keeping them a foot or less wide, and I think it a good plan. Where the winters are severe, the plants ought to be covered lightly with straw, cornstalks, or other litter. In some species, particularly the Hautboys, the barren and fruitful plants are separate, and therefore when in bloom, the superfluous quantity of males should be carefully taken out, as then they can be readily distinguished, and it would also be a good turn to set out a new bed, as the two kinds could be rightly apportioned, and they will succeed very well by taking up some earth with them. I have not satisfactorily ascertained what is the best apportionment, but it is stated by your "New Jersey Subscriber," in No. 8, to be one male plant to ten females, which I should suppose a good arrangement if planted as I have suggested; but if in hills, I would advise about one male to eight females—in both cases however, much will depend on placing the males at equal and proper distances. If in narrow beds, the males should be confined to the centre: if in hills, they should be planted in the following order—first row, all females—second row, first hill females, second male, two next females, then one male and two females throughout the row—third and fourth rows, females—fifth, a mixt row (as before), then two rows of females, and so on until the whole ground is planted; finishing however, with a single row of females as in the beginning; and so should each row be ended. The male flowers are known by their stamens; or those who are not acquainted with the sexual organs, can make a choice after the decline of the flower, taking such as do not yield fruit, for males. Last year my plants were attacked by the White Grub, and I believe that it frequently happens, that old beds are infested by a species of aphis or louse; when this is the case, it is best to prepare a new bed. I am of opinion that it is with this, as with most of our other crops; that the principal failure is owing to the depredation of insects; and this may account for the success which attended the case mentioned by Mr. W. S. Gibbs, in No. 16, where grass was intermingled with the strawberries—but instead of following a practice so slovenly, and which, (I think) must eventually prove ruinous, I would urge the necessity of investigating the particular species and habits of the depredating insect; and having ascertained these, we should not be long without a remedy.

I heartily join with your other correspondents in requesting further information; as a fruit so delicious and wholesome, ought to be especially attended to—and I am persuaded, that our bountiful Creator has given us a capacity rightly to manage all things which he has been pleased to place under our direction, and that whereinsoever we fail, it is because we do ant properly exercise our faculties.

Your's, very respectfully,
JAMES WORTH.

* * *

The London Horticultural Society have lately sent out to this country Mr. David Douglas, an eminent botanist, for the purpose of collecting specimens of rare plants, vegetables, and fruits in the United States and Canada. In his instructions, Mr. Douglas is directed, immediately after his arrival at New-York, to call on Dr. Hosack, of this city, and subsequently on Mr. Clinton, at Albany, for the purpose of receiving their advice and aid in furthering the objects of the agency. Both of these gentlemen are honorary members of the Horticultural Society of London, and have already contributed largely to enrich the spacious grounds belonging to that institution, with the indigenous plants of this country. Among other contributions, Dr. Hosack has sent to the society all the varieties of maize, which are found in the United States In acknowledgment of this liberal and very acceptable addition to the collections of the society, an elegant medal has recently been presented to Dr. Hosack, having on one side the head of Sir Joseph Banks, which is said to be a striking likeness; and on the reverse, the name of the person to whom it was presented, as a special honor. The same gentleman has also forwarded to the society a new species of plum, which he discovered in a garden in this city, additional specimens of which went to London by a vessel that sailed yesterday.

Mr. Douglas has now gone to Philadelphia. After visiting that city and its environs, together with the state of New-Jersey, which is rich in fruits, he will return to New-York. As soon as he has completed his examinations and collections in the vicinity of this city, including the extensive gardens of the Messrs. Princes, at Flushing, he will visit Albany, to confer with Mr. Clinton, and take his advice with respect to his route to Niagara, through the western counties of this state. He is authorised to deviate as much from a direct route to Niagara, as may be deemed advisable, and he will probably visit most parts of the state. We doubt not our citizens will afford him every facility in making a collection of such rare varieties of vegetables and fruits as our extensive and diversified territory produces.

At Amherstburgh, in Upper Canada, Mr. Douglas is instructed to call on Mr. Briscoe, who we believe is a member of the society, and confer with him, as to his route and collections in the British Provinces. He will visit the banks of the Thames, and some of the plants now growing on the margin of that remote and solitary river, which is near the borders of Lake Huron, are destined to drink the waters of the Thames in England and to bloom in the gardens of the metropolis.

The whole of this survey is to be completed before the setting in of winter, when Mr. Douglas will re-embark. for his native country. taking with him the result of his botanical researches. The instructions of Mr. Sabine, the secretary of the London Society, who is understood to be a gentleman eminent for his scientific attainments, breathe a spirit of liberality and good feeling towards this country, and some of its distinguished citizens, which have not on all occasions characterised the intercourse of foreigners. We are gratified to learn, that measures have been taken, for opening a correspondence between the Horticultural Societies of London and of New York. The institution in this city is yet in its infancy; while that in London has been long established, and has become one of the most respectable and valuable associations in England. Its transactions, the last two numbers of which have just been received by Dr. Hosack, are published in a very superior style with plates, and contain a great variety of interesting matter. It is believed there is but one copy of the work in this city.

Little attention has hitherto been paid in any part of the United States, to the science of horticulture. Nothing like a regular system of gardening has to our knowledge been introduced Few, if any books on the subject are consulted; and the first principles of one of the fine and useful arts, (for horticulture unites both of these characteristics) are but little understood in a country which opens a wider field than any other on the globe for such improvements. If the horticultural society of this city were somewhat extended, and the efforts of its members stimulated by the stated publication of its transactions, it might perhaps form a rallying point, and lead to the institution of similar societies in other parts of the country. But these are suggestions which belong more properly to the members of the society than to the editors of newspapers; and we conclude with expressing a hope, that the measures about to be taken will be prosecuted with vigor and crowned with success.—*N. Y. Statesman.*

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

Baltimore, August 15th, 1823.

Sir,

I beg leave to call your attention to a weed or thistle, that bids fair to be a pest to this country, if not noticed in time—it may be found ten miles from this city, though only four years since, it was first brought to this country and emptied on a vacant lot S. E corner of Wolf and Fleet streets, (F. P.) where it is now to be seen so thick and briery, as scarcely to admit a rat to run in it; also in great abundance on all vacant lots on the Point.

As no one appears to have noticed this imported pest, I have thought proper, hoping some ways and means may be taken to arrest its progress, which may be done if taken in time, otherwise from its rapid progress, may spread so as to become a curse to our agricultural country.

J. WRIGHT.

Editorial Correspondence.

CROPS IN GEORGIA.

Extract of a letter to the Editor, dated Eatonton, Geo. 15th August, 1823.

"Crops of wheat the present year in this section of the state have been very good: wheat now worth from 75 to $1 25 per bushel. The prospect for a crop of corn is unusually good.—The very low price of cotton the last winter, induced a number of our farmers to plant much less than heretofore, and much more corn. It is now the general opinion, that corn will not sell the next winter, in this section of the state, for more than 25 or 30 cents per bushel, and it is calculated that about the time crops of corn are gathered, that it may be had for 20 cents per bushel.

"The quantity of land cultivated in cotton, is less this year by a fourth or fifth, than has been for the last several years. The crops of cotton are now very promising, but the rot has made its appearance, and we can make no calculation as to its ravages; if, however, it should not be more fatal than it was last year, we may calculate on more cotton from each acre in cultivation than the last year."

* * *

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

Queen Anne, July 7, 1823.

A report of the tobacco inspected at and delivered from Upper Marlborough Inspection Warehouse, during the quarter, commencing on the 7th day of April, in the year eighteen hundred and twenty-three, and ending on the 7th day of July in the year eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	634		6	640
Number delivered.	254			254

SCOTT & SASSCER, Inspectors.

Treasury Office, Annapolis, July 17, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Pig Point Inspection Warehouse, during the quarter, commencing on the seventh day of April, in the year eighteen hundred and twenty-three, and ending on the fifth day of July, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	80			80
Number delivered.	36			36

GASSAWAY PINDELL, Inspector.

Treasury Office, Annapolis, July 26, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

* * *

A late number of the National Intelligencer contained a Thermometrical Table of the state of the weather at Thompson's Island, during the month of July. This table was furnished for publication by Commodore Porter, and has called forth the following communication from Mr. Robert Little, of Washington, which gives quite an interesting fact relative to the difference of temperature between that city and Thompson's Island:

Gentlemen—Your communication this morning of the Thermometrical Register, received from our gallant and scientific friend Commodore Porter, at Key West, is a valuable document. It is an addition to our knowledge of the relative temperature of our immense country, and is another gratifying indication of what kind of men our leading naval officers are.—While natural and moral courage are thus found connected with love of science and patient observation, America has every thing to hope for from her sons.

In comparing the register kept at Thompson's Island for July 1823, with that kept in Washington City, during the same month, I notice the following results. We have here a much wider range; our mornings and evenings are cooler, but at the hottest period of the day, the difference is inconsiderable, not averaging more than two degrees in the whole month. There was only one day in the whole month in which the thermometer was one degree higher than at Washington. But on the other hand, owing to the little variation of that instrument in the Gulf of Mexico, the temperature at 8 o'clock A. M. was seven degrees higher than at Washington on the average.

		Maxim.	*Minum.*
Mean heat at Washington, for July,	78	91	65
Key West,	84	92	78
Difference,	6	1	13

ROBERT LITTLE.

Washington, August 16, 1823.

* * *

AMERICAN DUCK.

An article has appeared in the "Nantucket Enquirer," calculated to injure the deserved reputation of American canvass, other than that manufactured by George Johnston, of Salem, by stating that government has contracted for the *exclusive* use of the Salem Duck in the Navy.—Now this is not the fact, the Commissioners of the Navy having subsequently to their orders to Mr. Johnston, *renewed* their contracts, with at least one of the Patterson manufacturers, for a considerable quantity. Government has been supplied for several years with canvass from Patterson, and its superiority in every respect over imported canvass has been actually and fully tested both in the U. S. navy, and in the Merchant's service, and it needs no disparaging assertions to bolster it into notice. Exclusive claims to superiority in sciences and the arts, too, cannot be granted by NEW JERSEY.

* * *

Perfection of the Arts with a Witness.—A man in London has brought to light the wonderful property of steam in *Incubation.* The papers give quite a laughable account of his examination before the Lord Mayor, during which, he said that in the incipiency of the business, he had to sit up thirty days and nights and turn the eggs lest the birds should be deformed; but now he could produce a thousand chickens in one night, and of much more unexceptionable character than if brought up under the immediate care of their mothers—and that chickens produced in this way, laid eggs at all seasons while those that came in the natural way, only exercised their faculties at stated seasons.

EXTRACTS FROM THE

London Farmer's Journal.

RYE GRASS.

Mr. Mills (Editor of Duhamel's Husbandry,) published in 1763, in three volumes, "New and Complete System of Practical Husbandry," which is a curious compilation of sense and nonsense. In his chapter on *natural grasses*, he particularly recommends to cultivation, the *common couch*: the *wall barley grass* or *way bennet*: the *annual poa*, or *Suffolk-grass*, and the *flobe fescue* All these are very strongly described in his treatise, although they are sufficiently identified; and he laments very earnestly, the *great ignorance of practical farmers*, and their inattention to these important improvements. Of rye-grass he says, "Duhamel rightly observes, the ground that has been under this crop, is not so able to bear *wheat the next year*, as if it had been cropped with lucerne, sainfoin, or clover." This proves to be an ancient remark as to the deteriorating quality of the old rye-grass; and the reason he says probably is, that "*The multitude of matty roots* of *the* rye-grass, which run on the surface of the ground, hold the earth so strongly together, that they cannot easily be disentangled from it by ploughing."

"We distinguish, (says he,) two considerably different species of the rye-grass, viz:—the *Lolium rubrum*, and the *Lolium album*," which latter he makes to be the *Yvraie* of the French, and adds, that it is the sort chiefly cultivated in England; but it is very coarse, and unless it be not quite early for hay, it becomes so hard and wiery that few cattle care to eat it: for this sort of grass has but few leaves, and runs all to stalks." Afterwards he adds, "the red darnel is a considerably inferior species of rye-grass; for it has yet narrower leaves, and its stalks grow hard much sooner. It is very common in most pasture grounds, because it flowers early, and its seeds ripen and sow themselves before the hay is cut." In this description (excepting the narrow leaves,) he evidently means the *bromus arvensis;* and in this manner have grown the notions of *red and white darnel*, recognised by botanists as belonging to the genus *Lolium*, and supposed to be known in agriculture. The *white darnel* here called *Lolium Album* (although the writer evidently speaks of the common perennial rye-grass) is the *temulutume*, an annual species, and supposed to be the *darnel* of the south of Europe, (the term *Yvraie* or *intoxicating*, applied by the French, is no more than a translation of the Latin name of the species,) but the only *darnel* of British agriculture is the *bromus secalinus*. Further on the authur adds, "Mr. Lisle agrees with all other experienced husbandmen, that though rye-grass will maintain as many cattle on an acre, as hop clover will do, yet it does not, like it, improve the land for a subsequent crop of corn." This just and useful impression was soon made among attentive and discriminating cultivators, where rye-grass first spread; but the seeds continued to spread, and left the impression behind, so that in all parts of the kingdom the like consequences were to be experienced. The public is very much indebted to Mr. Coke, of Holkham, for bringing this subject forward at his meetings, where he has frequently declared that he could not get wheat after one year's lay of rye-grass; and we quite believe that *sowing the old rye-grass generally to turn convertible lands to grass*, (in fen countries and elsewhere,) has been the cause of much injury to the soil. We gladly take every opportunity in our power to give currency to this important conclusion, and to enforce the cultivation of the improved sorts, which are very greatly superior in every respect. No local patron, or friend to agricultural improvement, can do a more useful thing in his district, than to procure a few bushels of the improved sorts, and shew them in pasturage, and raise seeds, and distribute them at a convenient price; for the progress of individual observation needs to be accelerated by the aid of more active intellect.

USEFUL RECEIPTS.

Celery Sauce for Roasted or Boiled Fowls.—Take a large bunch of celery, wash it very clean, cut it in little thin bits, and boil it softly in a little water till it is tender, then add a little beaten mace, some nutmegs, pepper and salt, thickened with a good piece of butter rolled in flour, then boil it up and pour it in your dish; you may add a half pint of cream, a glass of white wine, and a spoonful of catsup.

Brown Celery Sauce.—Stew the celery in a little water, then add mace, nutmeg, pepper, salt, a piece of butter rolled in flour, with a glass of red wine, a spoonful of catsup and half a pint of good gravy, boil all those together and pour them into the dish.

To dress Calf's Head Soup.—Take a calf's head, (with the skin on if you can get it) part of the liver and lights, boil it in six quarts of water, until you can take the bones out, put it on a dish, season it with pepper, salt, and sweet margarum, thyme and sage, mace and cloves, skim the water if there be any fat on it, then put it all back in the same water that you boiled it in, and let it boil till done; just before you take it up, put one glass of wine and brown it with a little burnt sugar, thicken it with a little butter and flour. If you want to make a great deal of soup, you must add a knuckle of veal, as the head only, will not make it rich enough, fry some forcemeat balls and put in it. If you wish to make the dish without soup, boil the head in the same way, and season it in the same manner, in the dish, with a little of the water it was boiled in, thicken it a little with butter and flour, put it in the oven till you think it is done.

Pea Soup.—To two quarts of peas put two gallons of water, three large onions, a handful of parsley, a little thyme, pepper, and salt.

Mrs. G's Famous Bunns.—One pound and a half of flour, (a quarter pound left to sift in last) and a half a pound of butter cut up fine together; then add four eggs beat to a high froth, four teacups of milk, half a wine glass of brandy, wine, and rose water each, and one wine glass of yeast; stir it all together with a knife, and add half a pound of sugar, then sift in the quarter of a pound of flour, and when the lumps are all beaten fine, set them to rise in the pans they are to be baked in. This quantity will make four square pans full.

Black Cake, much esteemed.—Three pounds of butter and three pounds of sugar beat to a cream, three glasses of brandy and two of rose water, twenty-eight eggs, and three pounds of flour added by degrees together, six pounds of currants, six pounds of seeded raisins, one ounce of cinnamon, one ounce of nutmeg, three quarters of an ounce of cloves, half an ounce of mace, one pound of citron. (Two large loaves baked five hours.)

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER 5, 1823.

☞ Every housewife ought to be informed, that a very useful and œconomical utensil has been lately introduced here from Philadelphia, which may be called a *conserving furnace*, by means of which great saving is attained in the cost of fuel, and the person using it, instead of stooping frequently before a large wooden fire, places it on a table in her kitchen or breakfast room, and with a cent's worth of *charcoal* prepares a large dish of fruit. These furnaces are of different sizes and of the shape of the common copper skillet. To have an idea of its construction, the fair reader may imagine a stone milk pan, wherewith we suppose them to be familiar—with sides nearly straight, and with *two bottoms*, so to say, with an hollow space between them, of about two inches—the *upper* bottom on which the charcoal is placed, is perforated with several holes, the size of a pistareen; or rather the holes are left in the clay, when the furnace is baked to the consistence of rough stone.—There is then a little aperture, or door, left through the outside of the furnace, to admit the air between the two bottoms, by means of which the charcoal is made to burn; should the fire become too brisk, and the stewing of the fruit proceed too rapidly, this aperture below is closed, which immediately checks it. We are told by ladies who have used them, that the idea of this furnace must have been conceived, like the Frenchman's new fashioned shoe, in "a moment of enthusiasm," and that it is in short regarded, in their department, as one of the grandest inventions of modern days. It is easy to see that it saves the person from distressing exposure to heat, and is far more cleanly and economical, than the old way of conserving fruits. We believe they are sold by the Messrs. Grundy's, in Charles street

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☞ It will be seen in another part of this paper, that the London Horticultural Society have sent out an eminent botanist, Mr. David Douglass, to make a botanical tour through New-York and Canada; and has been instructed, very properly, to call on Dr. Hosack and Governor Clinton, in his way—from these gentlemen he will doubtless derive essential aids; and we trust, that in the spirit of kindly feeling, which is generated by the cultivation of the sciences, Mr. Douglass will every where experience attention and assistance. It may be in the power of the correspondents of the editor of this paper, to make some acceptable offers through Mr. Douglas, to the horticultural Society of London—and any thing in the way of indigenous plants, grass, grain, &c. or native and natural curiosities, which any of our friends may have the kindness to send for that purpose, will be forwarded to Mr. D. with great pleasure. Let nations and politicians differ as they may, kindred spirits of all sects and countries, in the pursuit of knowledge, will cheerfully co-operate, to explore new fields, and to embellish those already in cultivation.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7—Howard street, from wagons, $6 37½—Superfine, $6 50—fine do. $6 25—Wharf, do. $6 12½—White wheat, $1 14 to 1 25—Red do. $1 05 to $1 10—Rye, 45 cents—Corn, 36 a 37 cts.—country Oats, 28 cts.—Beef, 8 cents per lb.—Live Cattle, $6 to $6 50 per cwt.—Bacon, hog round, $10—Pork, $4 50 to 5 50 per c. lb.—6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, $1 37½ to 1 50—Peas, black eyed, 55 to 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 35 to 36 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do., 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl.—No. 2, $2 37½—Fine salt, 60 to 65 cts. per bush.—Coarse, do. 70—Butter, (firkin) 14 cts. per lb—Eggs, 10 cts. per doz.—New Hay, $15 per ton—Old do $18—Straw, $10.

MARYLAND TOBACCO.—No sales.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

INTERESTING EXTRACTS—*from Agricultural and other addresses and memoirs, on the files of the Editor of the American Farmer.*

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From an address delivered before the Rockingham, (N. H.) Agricultural society—by the hon. William Plumer, Jr.

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The institution of agricultural societies, and the public meetings and exhibitions to which they lead, are of essential service to agriculture, as they tend to raise the character and improve the condition of the farmer; and by securing to his pursuit its just rank and influence in society, do much towards preserving him from the ignorance, the poverty, and consequent servitude, into which, in other countries, the cultivators of the soil have too often fallen.

Particular circumstances render these public meetings more necessary to farmers than to any other class of men. Merchants and manufacturers are collected in towns and cities, where great numbers come daily together; and activity and emulation are easily excited and preserved. With them, therefore, the sense of a common interest is constant and intense. Improvements made by one are immediately known and adopted by all the rest; in every new undertaking, the best models are followed; and the progress of society is seldom retarded by an obstinate attachment to old methods, after new and more convenient ones have been invented. This readiness to improve—this ambition of excellence, and quick instinct of interest—is always produced by the presence of multitudes in the same place; and is the natural result of the alternate union and opposition of many kindred minds, of numbers warmed by collision, roused by difficulties, intent upon the same object, and eager in the pursuit of one common good. Agriculture, on the contrary, seems almost deprived of this main-spring of action. Farmers live necessarily at a distance from each other, and pursue their humble, but useful labor in the solitude of forests, and amidst the silence of nature; with few friends to applaud their success, or rivals to call forth, by competition, new efforts of skill or fresh exertions of industry. It is to supply this want of emulation, to rouse this sluggish indifference of spirit, and present more powerful motives to rural activity and enterprise, that agricultural societies have been recently formed in different parts of our country, and premiums offered, for proofs of uncommon success, in the various branches of practical husbandry.

The more any pursuit is made the subject of general enquiry and scientific arrangement, the higher it rises in the scale of improvement, and the greater dignity and importance it acquires. Unfortunately for agriculture, it has, from the earliest ages, been more practised as an *art* than studied as a *science*. It seems indeed to have been taken for granted, that this most extensive and difficult of all the arts, could be brought to perfection, without those aids of science, to which others owe their chief success. The greatest improvements in many, if not all, the arts of life, are acknowledged to have been made, not by persons engaged immediately, and exclusively, in the practice of those arts; but by men of extensive information and general science, whose minds were enlarged by study, and trained to a careful survey and intimate acquaintance with the various objects of human knowledge. Proofs of this position might easily be adduced. The mariner traverses the ocean, by the aid of instruments, which he did not invent, and of tables, whose principles he does not understand; but which were discovered, and adapted to his use, by men who never set foot on board of a ship, and who knew nothing of navigation beyond its theory. The same dependance of art on science might, if necessary, be instanced in many agricultural processes. It ought, therefore, gentlemen, to be our study, as it is the object of our society, to encourage agriculture, by a judicious combination of science and practice; to excite enquiry, and impart information; to suggest new experiments, and communicate the result of those already tried; to rouse by premiums and honorary rewards, a spirit of honest pride and generous emulation; to cherish in the farmer, an ambition—the wisest he can indulge—to excel his neighbors, in the amount and goodness of his crops, in the breed and fatness of his cattle, in his mode of doing business, and in the general appearance, order and neatness of his farm; in a word, it should be our endeavour to render agriculture more regular and systematic in its arrangements, more certain and profitable in its returns, and consequently an object of more general attention and greater regard.

The leading principles of agriculture are the same in all countries. The object every where pursued should be, with a given amount of labor and expense, to obtain from the earth the greatest possible amount of produce which, without impoverishment, it can be made to yield The means employed for this purpose must indeed vary with the soil and climate, and the kind of crops intended to be raised; but these are principally matters of detail, and do not materially affect the great outlines of a good system of husbandry, which being derived from nature, are uniform and invariable. To drain the earth of its superfluous moisture; to keep it loose and clean, by frequent ploughing and careful cultivation; to enrich it by suitable manures; to select the crops best adapted to the different kinds of soil; and to vary and assist them, by a judicious rotation;—these few operations, plain and obvious as they appear, form, of themselves, a system of husbandry, which is at once simple, comprehensive, and distinct. A few remarks under each of these heads, will enable us, at the same time, to bring into view some of the most important principles of agriculture, and to notice briefly some of the leading defects of our own practice.

1st. Draining.—To drain the earth of its superfluous moisture, though an obvious dictate of reason, has been, in general, so little practised in this state, that draining is hardly considered, among us, as a regular agricultural operation. And yet in countries, where the earth has been cultivated with the most success, this branch of improvement has always been considered, as of the first importance. "Lay your land dry?" says a celebrated English Farmer, "before you "attempt any thing else." A due proportion of moisture is indeed necessary to the growth of plants; and there are some soils, composed principally of sand and gravel, in which draining is not only useless, but might be injurious. But on most farms there is much land, which is, every fall and spring, filled with water; and thus rendered cold, sour, and unproductive, for want of drains and ditches to convey off the stagnant mass. Our low lands are thus converted into swamps and morasses, of little or no value to the owner, though in themselves capable of being made the richest parts of the farm. The waters collected in these bogs and pools, serve in wet season, to drown the land, and in dry, to infect the air. Both health and profit equally require their speedy removal.

Wherever the soil rests on a bottom of clay, or compact sand, as is the case with much of our low land, the water which falls upon it, or runs in from the surrounding hills, being unable to enter this impervious substratum, must remain upon the surface, till evaporated by the sun. But this evaporation does not take place, till long after the proper season for sowing and planting has passed. These operations are, therefore, usually performed, on such lands, while the earth is still wet and cold; and the seed, thus sown or planted, either rots in the ground, or comes up so late and imperfect, as hardly to repay the cost of cultivation. In such cases, a little time judiciously employed in constructing drains, and opening ditches, would add more value to the land, than twice the amount of labor spent upon any other part of the farm. Nor is it to be apprehended that on higher lands, the earth will be deprived, by draining, of any moisture which is either necessary or useful to the soil. It is to the copious dews, and gentle rains that fall from May to October, that the farmer is indebted for his crops, so far as water is concerned in their production; and these he is in no danger of losing by the course here recommended. But the floods of spring, and the long drenching rains of autumn, which inundate his low lands, and render his fields cold and unproductive, should never be suffered to stagnate within his bounds; but should be provided with an easy and ample outlet, wherever the situation of the land admits (as it generally does) of being drained.

2d. Tillage.—Having thus provided against the excesses of the watery element, the farmer's next object should be to keep his lands loose and clean, by frequent ploughing, and careful cultivation. The earth, in its natural state yields a supply, worthless and scanty compared with that, which the skill and labour of man enable him to draw from its bosom. This increase of produce rises principally from the manner in which the soil is prepared for the reception of seed and the growth of the intended crop. For this purpose, it is a settled maxim of agriculture, that *the finer, and deeper the tilth, the better and more productive the husbandry.* The finer the particles of matter are divided, the more readily will they assume the forms of vegetable life, and the more copious is the supply which they furnished as food to plants. To loosen, divide, and pulverise the soil, in every possible form, and to the utmost practical extent, is therefore, the first great step towards rendering it fertile and productive. This can be effected only by a constant and liberal use of the plough,—that most important of all agricultural implements, which never runs without enriching its owner.

But the quality of the soil should not only be improved, but its depth increased; and this must be done by deep, as the former, by frequent ploughing. The sun and air exert a steady and powerful influence upon whatever substances fall under their action; and it is to this influence that the earth is indebted for much of its fertility. The deeper, therefore, land is ploughed, provided it be done gradually from year to year, so as not to bring up too much dead earth at once, the more its value is increased, and the greater will be its returns to the diligent cultivator. The object of ploughing being to obtain a fine mould, it ought to be done, principally, in the fall, that our severe and frequent frosts, which are, in other respects, so injurious to the farmer, may here come in aid of human industry; and the great process of deepening and pulverizing the soil, be carried on by the elements, almost without the labour of man. If the land be low and wet, it should be thrown into ridges, as well as ploughed, in the fall, that it may not suffer from the water.

Nor are these the only good effects of deep and frequent ploughing. The careful husbandman suffers nothing to encumber his ground, which does not add to its value. To prevent the growth of weeds is therefore, with him, an object scarcely less important, than to promote the growth of corn or grain. The necessity of destroying them, when they appear, is admitted by all; but this after-prudence, by which evils are attacked only when they have reached their maturity, is surely much inferior to that preventive wisdom, which foresees the evil, and prevents its existence. By shallow ploughing, the seeds of grass and weeds, with which the earth is always full, and deposited near the surface, ready to spring up with the intended crop, and requiring much time and labour to keep them down. By deep ploughing, on the contrary, they are buried so low in the earth, that few of them ever quicken into life; and those few pierce the surface, so late in the season, as to do little injury to the harvest. A constant, liberal, and judicious use of the plough may, therefore, be recommended as the best means of promoting the growth of plants, while it prevents the growth of weeds; of deepening the soil, by exposing all its parts to the sun and air; and thus of rendering it loose and friable, pervious to the roots of plants, and ready to give forth all its strength in the production of useful crops.

3d. MANURES.—But however well the earth may be prepared, by these means, for the purpose of agriculture, it must in time be exhausted, by a continued course of cropping, if its fertility be not preserved and sustained, by the application of suitable manures.—The food of plants is derived either from the earth, air, or water; and the proportion dawn from each depends upon the nature of the plant. Some plants derive their chief support from the atmosphere, and will grow and flourish, at least for a time, without even touching the ground; others live only in water or on its surface; but the greater part require the combined aid of all three to sustain and perfect their growth. The fovourable effects of water upon plants are well known and obvious. A heavy dew, or slight fall of rain, revives vegetation, and gives a refreshing glow and animation to the face of nature. These agents are, however, very little subject to the power of man. In our rough and uneven country, and in the present state of our agriculture, irrigation could not generally be attempted with any prospect of success. We may indeed guard against the bad effects of too much water, by draining; but cannot expect to collect it in tanks, as in India; or to lead it, as in Lombardy and other parts of Europe, in ducts and canals, to irrigate and refresh our thirsty soils.

With respect to the fertilizing influence of the air, or rather of the putrescent matter floating in the atmosphere, the only method by which we can avail ourselves of it, in greater abundance than is spontaneously furnished by nature, is to cultivate such plants as have a peculiar attraction for this floating manure, and absorb it, from the air, more copiously than others. This is the case generally with broad-leaved and wide-spreading plants, which, drawing their nutriment principally from air and water, are, on that account, less exhausting to the soil. It is to its peculiar power of enabling plants to extract, and transfer to the earth, this inexhaustible wealth of the atmosphere, that *Gypsum*, or plaster of paris, seems to owe its principal value as an agricultural agent. It accordingly produces the greatest effects on dry or calcarious soils, where a deficiency of moisture is usually felt; and succeeds best when applied to clover, corn, and other large plants. Ashes is another manure which seems to act, something in the same way, by its power to attract moisture from the atmosphere; and therefore does best, where this moisture is most wanted, on light lands with a loose or gravelly soil.

But it is principally on the nutriment drawn from the earth, that the husbandman must rely, for the goodness of his crops. His great object here, is to extract much produce, with little impoverishment to the soil. For if he loses, in the value of his lands, what he gains in the amount of his crops, his industry is worse than useless; and he is becoming daily poorer by his labour. Much good land has been in this way destroyed, for want of considering that the earth requires food as well as man; and that a field may be starved, if not as quickly, yet as certainly, as an ox or a horse. Any course of husbandry which leaves the land, year after year, worse than it was before, must be pronounced decidedly bad; to keep it where it was, is barely tolerable; and it cannot be called good, if every year does not render it richer and more productive than the last. By returning the whole crop to the ground on which it grew, the strength of the soil would not only be preserved, but its fertility increased. It is in this way, that lands in a state of nature are enriched, by the mere progress of vegetation, and are always found eminently productive by the first cultivators. But to raise crops, with no other view than merely to enrich his lands, would be of no service to the farmer. He ought, however, always to recollect, that if, for any length of time, he would preserve his lands in good heart, under constant cultivation, he must bestow upon them, in the form of manure, animal and vegetable matter, equal to that taken from them in the form of crops.

Nor is this so difficult to be effected as might at first be supposed. Beside the ordinary supplies of the barn-yard, upon which I need not here enlarge, the refuse of his crops, which though useless to him, is invaluable to his lands, and the aid which may be derived from lime, gypsum, salt, marl, and other extrinsic sources—our swamps, and meadows, and low lands, are every where filled with a rich mass of vegetable mould, which may be truly pronounced inestimable in value, as it is inexhaustible in amount. It has been here accumulating, for ages, from the decay of vegetables, the fall of leaves and trees, and the wash of the surrounding lands. Into these neglected nooks, and dark recesses of his farm, the industrious husbandman ought to dig as for mines of gold. If rightly improved, they will furnish him with the means of restoring vigour to his exhausted lands, of preserving those that are still unimpaired, and enable him, by the aid of drains, to convert his useless wastes into fertile fields. I need hardly remark how few among us have availed themselves, in its full extent, of this great source of agricultural improvement.

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In the early settlement of the country, there was no want of land, but a very great want of men. The object with the first settlers, was, therefore, to spread their labour over as large a surface as possible. The permanent improvement of the soil was, with them, an object of no importance. When one spot was stripped and plundered of its wealth,—the wealth of ages, accumulated on its surface,—another was at hand, as cheap as the former, and of unexhausted fertility. While engaged in clearing up new lands, and struggling with the difficulties of a new country, much system or regularity was hardly to be expected. But this excuse for bad husbandry, once so valid, can be no longer justly urged, at least, in the lower parts of the state. A new era has accordingly arisen in our agriculture, produced by the increase of our population, the diminution of foreign commerce, and the sudden growth of manufactures amongst us.

With this change of circumstances, a spirit of activity and improvement has displayed itself, which, if properly directed, will produce the most happy results for the whole community. If any inducement, to assist in giving it this direction could be wanted, beyond that found in the pleasure and profit of the pursuit, it would be perceived, by every generous mind, in the peculiar value which even small improvements in agriculture possess, on account of the immense number to whom the benefit of such improvements accrues. Great favors conferred on a few, contribute less to human happiness, than small advantages which reach to many. The erection of a palace, though at the expense of millions, is an achievement of less importance to mankind, than an improvement, however small, in the form or structure of the plough, by means of which four oxen should perform the labor now required of six. In the former case the pride of one man only would be gratified; in the latter a whole nation is enriched.—That such improvements may be made, cannot be doubted by those who know what has been already done. We read in scripture, that when Elijah went to meet Elisha, he found the prophet in a field "ploughing with *twelve* yoke of oxen." We are not told how many men it took to drive, nor how many more to hold this unwieldly plough; but we may judge something of its rudeness of construction, by the team which it required. The Indians, when this country was first discovered, broke up their land with a stake, and had no better hoe than a clamshell.

When we compare these rude inventions with our present agricultural implements, (imperfect as these latter still are,) we can be at no loss to decide who were the greatest benefactors of mankind—those ingenious mechanics, who first turned the stake of the savage into a plough, and by subsequent improvements reduced the team from twelve to two yoke of oxen,—or those sanguinary warriors, who, to enslave nations, converted ploughshares into swords, and, to feed their rapacious armies, robbed the husbandman of his harvest. Yet the former are forgotten or despised, while the latter are remembered and admired. The same misapplication of applause, on the one hand, and exertion on the other, may be traced in every walk of life. Half the ingenuity expended, in vain, upon the *perpetual motion*, would have supplied us with innumerable implements of husbandry, more perfect than any we now possess; and a tenth part of the time and talent devoted to astrology, to the transmutation of metals, or the *elixir vitae*, would have discovered the various properties of soils, and made us familiar with the best modes of farming. The art of making cider,—the best and healthiest of our liquors,—is still in its infancy; while that of making rum, whose deadly poison sends thousands yearly to the grave, has been for centuries perfectly understood!

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The connexion of virtue with regular industry, and of happiness with the gradual acquisition of property, is among the kindest and most benevolent of the dispensations of Providence to man. He who from want of system and economy in his pursuits, adds nothing to his fortune, but is every day becoming poorer and more dependent, will be rarely found to be either a very happy man, or a very useful member of society. Acquiring nothing permanent by his industry, he takes little satisfaction in his business or profession, whatever it may be ; and can never experience those *pleasures of gain*—of constant, regular, though moderate gain—which every thrifty farmer feels ; and which,—however nobler minds may be swayed by higher motives—contributes, more than honor, wealth, or power, to make the mass of men cheerful, happy, and contented, industrious in their own pursuits, friendly in their intercourse with others, and useful, virtuous, and upright, in the various relations of social life.

For such men, vice and folly, extravagance and dissipation, the waste of luxury, and the *idleness which bringeth want*, possess but few attractions. Occupied incessantly with some useful labor, or some innocent enjoyment, they have no need of scandal to amuse their vacant hours ; envy comes not to corrode their tempers, nor disappointed ambition to corrupt their hearts. The idler finds them too busy for vice, and the demagogue too happy for factious discontent. Exempt from the noise and tumult of the bustling crowd, they enjoy, in calm contemplation, the beauties and the bounties of nature, before which the works of art, and the schemes of ambition, vanish and are forgotten. In the quiet dignity of rural retirement, they are wise, without the parade of learning ; powerful, without a wish to injure, and happy, without the pomp of office, or the ensigns of power. It might be thought too much to say, that he who conducts, with perfect skill and judgment, all the complicated concerns of an extensive farm, might as well direct an army or govern a state. And yet the one talent is, perhaps, as rare as the other, and the perfect farmer as seldom found as the able general, or accomplished statesman. His value is at least equal to theirs ; and if rank depended upon utility, the place assigned him, in public estimation, would not be less distinguished.

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FROM THE PITTSFIELD SUN.

ON GRAFTING APPLE TREES.

To the Editor of the New England Farmer.

Sir—Having seen in your papers some observations on the grafting and raising of apple trees, in which I have had much experience, am free to communicate the result of my observations.

I differ in opinion from such European authors as recommend the ground for nurseries to be made extraordinarily rich, as I observed that young trees, transplanted from a richer to a poorer soil, do not flourish or become so productive as such as are transplanted from a poorer to a richer soil.

The seeds of apple will not produce the same kind of fruit ; that I have fully proved, by one experiment. I raised in my garden, from the seeds of one favorite apple, ten trees, that after being transplanted in my orchard, grew to bear fruit. Not one of them resembled their mother apple, and no two were like each other. Seven of them produced very small sour apples, some white, some striped, some yellow, some early, others late. These 7 trees I marked for grafting. Of the other three, the largest and most thrifty tree produced an excellent, pleasant, long, striped apple, of good size, very mellow and juicy in autumn, neither sweet nor sour.—The next largest tree produced a red, sweet apple, about the size of the flat pippin, and will keep in the winter near as well. The other, the smallest tree of the ten, which grew the longest time before it produced, bore large, yellow, flat, sweet apples, that weigh about one pound, and fall off in due time for drying or making cider.

I have estimated such parts of my orchard as have been planted with trees, without grafting, to average about three good and valuable kinds of apples, from every ten trees. I disapprove of grafting the trees, when small in the nursery, as we may cut off better fruit than we insert, and destroy some better and larger kinds than are yet known.

I believe in *Darwin's* ideas, that the different kinds of apples have their certain age, after which they depreciate and expire, and that grafting is but an elongation of the same declining kind of tree ; especially as the *Vandaveer* that used to be so large and fine since my remembrance is now extinct in the place of my nativity with a bitter rot, and the *flat pippins*, *Rhode-Island greenings* and *blue pearmains*, are very much depreciated in size and flavour.

At an early period of life, I was instructed in the practice of grafting, and thought I understood it perfectly, but a circumstance took place to convince me to the contrary, by some important facts in that art, which should be generally known.

Thirty-five years ago, last winter, I was travelling in the upper part of Maryland, near the banks of the Potomac river, and was informed that they had a curious old German doctor, a man of great science, that had paid much attention to orcharding ; that he had made between 200 and 300 acres of grafted orchard, and made vast quantities of cider all winter to supply the cities of Baltimore and Alexandria, besides feeding and fattening a large stock of creatures. I turned out of the road and went to see him, and was surprised, as I rode to the door, to hear him tell his negro, in German, to give my horse half a bushel of sweet apples. His situation was on a lime stone land, of a S. W. descent ; some very rough ; but his trees appeared to grow well amongst the rocks. In places where the ground suited it with lime stone springs, for mowing land. His orchards were too extensive for my view. He had a number of large framed buildings, in which he had large quantities of apples gathered to *freeze*, and said that apples after being frozen made the most and best cider. It was a mild thawing time, and he had abundance of people making cider. They ground their soft apples under large wooden wheels, turning in circular troughs. On the beds of the presses they had frames of slats in which they put straw to retain the soft pomace. Their presses were long beams, say 60 feet, raised and drawn down with levers. As the establishment stood on descending ground the cider ran from the presses, in troughs, and passed through several strainers before it entered the casks.

He informed me that he had been bred to orcharding in Germany, that he had raised and planted all his trees, and grafted the greater part of them, after they began to bear, if he disliked the fruit.

I observed that I thought the season would be too short for grafting so many trees. He told me that it might be performed at any time in the fore part of summer, if a wet growing time, and I would observe the following directions :

1st. Be careful not to loosen the bark of the stock in splitting it ; and the safest way to guard against that is to split the bark with a sharp pointed knife, before the splitting of the stock.

2d. As after the leaves are grown it is not expected to use scions from a distance, but to cut them out of the orchard as wanted, be sure in selecting the grafts to cut them in such manner as to always take the bulge, between the year's growth, to shave and set in the stock, as in that joint or bulge, between the year's growth, the wood is curled open, and porus, to receive the sap readily from the stock, and such scions will grow and flourish—when if taken from any other part of the twig they would not grow.

3d. The clay should be very fine and tough, and pressed and bound water tight round the stock below the split to retain all the sap that oozes out to support the graft.

By strictly adhering to this German science, I have grafted several apple trees as late in the season as the latter part of June, that flourished and grew well, and are the best of bearing trees.

From all the experiments that I have tried in raising orchards, I would advise setting out of the trees, and seeing a sample of their fruit before grafting, as all the best kinds of apples were at first natural, and perhaps by such a general trial some better kinds may appear than are yet known.

I would also advise in grafting such bearing trees, to only take off half the top in one season. I have often taken off the whole, and if the season is wet they have done well, but if the season proves hot and dry, the trees generally die, or the sun kills the bark on the south sides of them, and then they are ever defective ; a rot takes place, and such trees generally blow down.

I have also observed that apple trees grow and bear the best when planted beside a stone wall, more especially these late seasons of great drought, that in parts of the country where the fences are generally of stone, abundance of apples might be raised without the trees incommoding the plough, and where there is only one row of trees across a field they may be planted within 15 or 20 feet of each other. In planting trees by a wall I would recommend as much as may be, to plant them on the north sides to keep the blossoms back and secure from the late frosts.

SAMUEL PRESTON.

Stockport, *Penn. Oct.* 10, 1822.

FROM THE NEW ENGLAND FARMER.

Admiral Sir Isaac Coffin, member of the British Parliament, having from a regard to his native State, and with a wish to promote its agriculture, purchased at great expense, a bull of the first breed in Great Britain, and sent him as a present to the trustees of the Massachusetts Society for promoting agriculture—

At a meeting of the Trustees held this 21st day of August, 1823 :

Voted, That the thanks of this Board be presented by the Corresponding Secretary to Admiral Coffin, for his very valuable present, and that he express to him their sense of his patriotism, and attachment to his native soil, which neither time nor distance had been competent to weaken.

That the animal presented by him, is a noble one, and affords in his own person, proof of his descent from the most approved stocks, independent of the historical pedigree which accompanies him.

That for the present season, he be placed at the farm of *John Prince*, Esq. of Roxbury, and that he will be permitted to be used by any farmers at the moderate price of five dollars for each cow. In future years he shall be removed, from time to time, to various parts of the Commonwealth, at the discretion of the trustees, and in no case shall an higher premium be required than is above stated, it being the wish of this Board to improve the stock of the country as rapidly as possible ; and as the trustees receive no emolument from him, should there be any, it will go to support the great interest of agriculture If a lower sum should be demanded, farmers might be careless of his progeny ; if an higher they might not choose to incur so great an expense, at so much risk ; his cost in England was $581 64 ; the expenses of his transportation, &c $113 26 cents ; whole amount $694 90. His pedigree, as follows :—got by Mr. Wetherell's North Star ; dam by Comet ; grandam by Wellington ; great grandam by Granby.

North Star was by Comet ; dam by Baronet ; grandam by Cripple ; great grandam by Irishman ; great great grandam by Hubback.

Notice will be given seasonably, every spring, in what county and town this bull will be placed, to the intent of affording to all parts of the state the advantages which may be derived from a stock, which the first agriculturists of Europe have deemed the most perfect, in regard to disposition for fattening, and aptitude for the dairy. This improved breed is not the result of accident, but of great care and attention, to make such crosses of the breed of horned cattle, as should combine the most valuable qualities. The trustees have every reason to believe, that the bull presented by Admiral COFFIN, (which arrived in fine order) combines all these qualities, judging from his pedigree and appearance.

When the trustees speak of the price of five dollars for each cow, being moderate, they have no reference to ordinary prices, but to the value affixed to bulls of this approved race, in England and America. Bull calves, of six months old, have been sold as high as 50 guineas, or $233, in England, and in this country, at $50. If the price were diminished, the best cows would not be sent to the animal ; and it is the desire of the trustees that only the best cows should be sent. Breeds of cattle can never be improved, until there be sufficient encouragement offered for their production, and high prices alone can effect this desirable end.

Admiral Coffin was elected an honorary member of the Society, and a vote passed to present him the Society's Gold Medal, and the numbers of their Journal.

A copy from the record,
BENJ. GUILD, *Asst. Rec. Sec.*

The Trustees of the *Massachusetts Agricultural Society* cannot omit the opportunity of tendering, publickly, their thanks to Captain JACKSON, of the ship Herald, for the great care and attention bestowed by him on their fine imported bull, Admiral, presented to the Society by Sir Isaac Coffin, without which care he must probably have perished during his long and boisterous passage. This example is worthy of imitation, as upon the patriotic assiduity of ship-masters often depends the acquisition of plants and animals, which may prove of importance to their country.

In behalf of the Trustees,
JOHN LOWELL, *President.*
Roxbury, *August* 28, 1823.

* * *

Remarkable Occurrence.—In the year 1664, on the 5th of December, a boat on the Menai (North Wales,) crossing that strait, with 81 passengers, was upset, and only one passenger, named Hugh Williams, was saved. On the same day, in the year 1785, was upset another boat, containing about 60 persons, and every soul perished, with the exception of one, whose name also was Hugh Williams ; and on the 5th August, 1820, a third boat met the same disaster, but the passengers of this were no more than 25, and, singular to relate, the whole perished, with the exception of *one*, whose name was Hugh Williams !—*Bristol Mercury.*

* * *

Several interesting and very useful publications, connected with the every day's operations of house wifery, and domestic œconomy generally, have been published in England by Fredrick Accum—of these we have received his "TREATISE ON ADULTERATIONS OF FOOD AND CULINARY POISONS," his "CULINARY CHEMISTRY, EXHIBITING THE SCIENTIFIC PRINCIPLES OF COOKERY," and his "ART OF MAKING WINE FROM NATIVE FRUITS." To give the reader an idea of the scope of the first above mentioned, we have taken a notice of it from Blackwood's Edinburgh Magazine, and as the time is at hand, and the fruit ready for the ladies to make their conserves, we have also given some recipes on that subject from his culinary chemistry ; we shall continue to make these extracts, with reference to the season, rather than to the order in which they are presented in the work, and though we have the vanity to hope that the Farmer is generally read by the *mistress*, as well as the master of the families in which it is taken ; to be useful to the *former* is our particular expectation and wish, in *making these extracts* ; we desire therefore that the numbers containing them may be placed in their hands. Of their correctness and utility, they are more competent judges than *we*, the husbands —*Edit. Am. Farmer.*

From Blackwood's Edinburgh Magazine, No. 35, Page 542.

A TREATISE ON ADULTERATED PROVISIONS.—BY FREDRICK ACCUM.

"THERE IS DEATH IN THE POT."
II. Kings—Chap. vi. Verse xi.

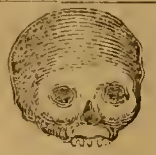
Mr. Accum, it appears,. is one of those very good natured friends, who is quite resolved not to allow us to be cheated and poisoned as our fathers were before us, and our children will be after us, without cackling to us of our danger, and opening our eyes to abysses of fraud and imposition, of the very existence of which we had until now the good fortune to be entirely ignorant. His book is a perfect death's head, a memento mori, the perusal of any single chapter of which is enough to throw any man into the blue devils for a fortnight. Mr. Accum puts us something in mind of an officious blockhead, who, instead of comforting his dying friend, is continually jogging him on the elbow with such cheering assurances as the following. "I am sorry there is no hope ; my dear fellow, you must kick the bucket soon. Your liver is diseased, your lungs gone, your bowels as impenetrable as marble, your legs swelled like door-posts, your face as yellow as a guinea, and the doctor just now assured me you could not live a week."

Mr. Accum's work is evidently written in the same spirit of dark and melancholy anticipation, which pervades Dr. Robinson's celebrated "Proofs of a Conspiracy, &c. against all the crowned heads of Europe." The conspiracy disclosed by Mr. Accum is certainly of a still more dreadful nature, and is even more widely ramified than that which excited so much horror in the worthy professor. It is a conspiracy of brewers, bakers, grocers, wine merchants, confectioners, apothecaries, and cooks, against the lives of all and every one of his majesty's liege subjects. It is easy to see that Mr. Accum's nerves are considerably agitated, that—

"Sad forebodings shake him as he writes."

Not only at the festive board is he haunted by chimeras dire of danger—not only does he tremble over the tureen—and faint over the flesh-pot : but even in his chintz night gown, and red morocco slippers, he is not secure. An imaginary sexton is continually jogging his elbow as he writes ; a death's head and cross bones rise on his library table : and at the visionary tombstone of the best end of his sofa he beholds a granite—

ON WHICH ARE INSCRIBED THE DREADFUL WORDS—



Hic Jacet,
FREDRICK ACCUM,
Operative Chemist,
OLD COMPTON STREET,
SOHO.

Since we read his book, our appetite has visibly decreased. At the Celtic club, yesterday, we dined almost entirely on roast beef ; Mr. Oman's London-particular Madeira lost all its relish, and we turned pale in the act of eating a custard, when we recollected the dreadful punishment inflicted on custard eaters, in page 326 of the present work. We beg to assure our friends, therefore, that at the present moment they may invite us to dinner with the greatest impunity. Our diet is at present quite similar to that of Parnel's hermit,

"Our food the fruits, our drink the crystal well ;"

though we trust a few days will recover us from our panic, and enable us to resume our former habits of life. Those of our friends, therefore, who have any intention of pasturing us, had better not lose the present opportunity of doing so. So favourable a combination of circumstances must have been quite unhoped for on their part, and most probably will never occur again.* V. S.

Since by the publication of Mr. Accum's book, an end has been for ever put to our former blessed state of ignorance, let us arm ourselves with philosophy, and boldly venture to look our danger in the face ; or, as the poet beautifully expresses it, in language singularly applicable,

"Come, Christopher, and leave all meaner things,
To low ambition and the pride of kings ;
Let us, since life can little else supply ;
Than just to swallow poison and to die ;
Expatiate free o'er all this dreadful field,
Try what the brewer, what the baker yield ;
Explore the druggist's shop, the butchers' stall,
Expose their roguery, and—damn them all !"
POPE.

Melancholy as the details are, there is something almost ludicrous, we think, in the very extent to which the deceptions are carried. So inextricably are we all immersed in this mighty labyrinth of fraud, that even the venders of poison themselves are forced, by a sort of retributive justice, to swallow it in their turn.—Thus the apothecary, who sells the poisonous ingredients to the brewer, chuckles over his roguery, and swallows his own drugs in his daily copious exhibitions of brown stout. The brewer in his turn, is poisoned by the baker, the wine-merchant, and the grocer. And, whenever the baker's stomach fails him, he meets his *coup de grace* in the adulterated drugs of his friend the apothecary, whose health he has been gradually contributing to undermine, by feeding him every morning on chalk and alum, in the shape of hot rolls.

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* *To save some trouble, we may announce that we are already engaged to dinner, on the 23d, 27th, and 28th of this month, and to evening parties, on the 22d, 23d, 26th, 28th, and 29th, and 3d of March.*

Our readers will now, we think, be able to form a general idea of the perils to which they are exposed by every meal.

Mr. Accum's details on the adulteration of wine are extremely ample, and so interesting, that we regret our limits prevent our making more copious extracts, and oblige us to refer our readers for further information to the work itself.

Having thus laid open to our view the arcana of the cellar, Mr. Accum next treats us with an exposé of the secrets of the brew house. Verily, the wine-merchant and brewer are *par nobile fratrum;* and after the following disclosures, it will henceforth be a matter of the greatest indifference to us, whether we drink Perry or Champaigne, Hermitage or Brown stout. *Latet anguis in poculo*, there is a disease and death in them all, and one is only preferable to the other, because it will poison us at about one-tenth of the expense.

"Malt liquors, and particularly porter, the favourite beverage of the inhabitants of London and of other large towns, is amongst those articles, in the manufacture of which the greatest frauds are frequently committed.

"The practice of adulterating beer appears to be of early date. To shew that they have augmented in our own days, we shall exhibit an abstract from documents laid lately before Parliament."

Mr. Accum not only amply proves, that unwholesome ingredients are used by fradulent brewers, and that very deleterious substances are also vended both to brewers and publicans for adulterating beer, but that the ingredients mixed up in the brewer's enchanting cauldron are placed above all competition, even with the potent charms of Macbeth's witches:

'Root of hemlock, digg'd i' the dark,
* * * * * *
* * * * * *
For a charm of pow'rful trouble,
Like a hell-broth boil and bubble;
Double, double, toil and trouble,
Fire burn and cauldron bubble.'

Mr. Accum very properly gives us a list of those miscreants who have been convicted of adulterating their porter with poisonous ingredients, and want of room alone prevents us from damning them to everlasting fame, by inserting their names along with that of the Rev. Sennacherib Terrot, in the imperishable pages of this miscellany.

Mr. Accum gives us a long dissertation on counterfeit tea, and another on spurious coffee; but as these are impositions by which we are little affected, we shall not allow them to detain us. The leaves of the sloe thorn are substituted for the former, and roasted horse beans for the latter. These frauds, it appears, are carried to a very great extent.

We must now draw our extracts to a close; but we can assure our readers, that we have not yet introduced them to one tythe of the poisonous articles in common use, detected by Mr. Accum. We shall give the titles of a few to satisfy the curious:—Poisonous confectionary, poisonous pickles, poisonous Cayenne pepper, poisonous custards, poisonous anchovy sauce, poisonous lozenges, poisonous lemon acid, poisonous mushrooms, poisonous catsup, and poisonous soda water! Read this and wonder how you live!

While we thus suffer under accumulated miseries brought upon us by the unprincipled avarice and cupidity of others, it is surely incumbent on us not wantonly to increase the catalogue by any negligence or follies of our own. Will it be believed, that in the cookery book, which forms the prevailing oracle of the kitchens in this part of the island, there is an express injunction to "*boil greens with halfpence* in order to improve their *colour?*" That our puddings are frequently seasoned with laurel leaves, and our sweetmeats almost uniformly prepared in copper vessels? Why are we thus compelled to swallow a supererogatory quantity of poison which may so easily be avoided? And why are we constantly made to run the risk of our lives by participating in custards, trifles, and blanc-manges, seasoned by a most deadly poison extracted from the *prunus lauro-cerasus?* Verily, while our present detestable system of cookery remains, we may exclaim with the sacred historian, that there is indeed "Death in the Pot."

CONSERVED FRUITS.

The preserving of the pulpy fruits employed in housekeeping for making fruit pies, tarts and puddings, so as to render them fit for that purpose, when they cannot be procured in their recent state, is an object of considerable importance in every well regulated family.

The expense of sugar is frequently urged as a reason for not conserving fruits in housekeeping, and to this may be added the uncertainty of success from the strong fermentable quality of many fruits, if the sugar has not been very liberally added. They may indeed be conserved for a length of time without sugar, by baking them in an oven and then closely stopping them up; but if the cork becomes dry, the atmospheric air exchanges place with what is impregnated by the fruit, which then soon becomes mouldy; some pulpy fruits may be conserved in good condition by the following method, for years, or even it is probable for a longer period, in hot climates.

CONSERVATION OF RECENT FRUITS WITHOUT SUGAR.

The following fruits may be conserved without sugar. The more juicy fruits of the berry kind, such as currants, mulberries, strawberries, raspberries, are not well calculated for this process,

METHOD OF CONSERVING GOOSEBERRIES,

Orlean Plums
Green Gages
Damsons

Peaches
Nectarines
Bullaces.

Let the fruit be clean picked, and not too ripe, put it into wide-mouthed, or what are called gooseberry bottles, let the bottles be filled as full as they can be packed, and stick the corks lightly into them; then place them upright in a saucepan of water, heated gradually to about 100 or 170° F. that is, until the water feels very hot to the finger, but does not scald. Let this degree of heat be kept up for half an hour, then remove the bottles one by one, and fill them up to within half an inch of the cork with boiling water; when cold let the cork be fitted very close, and lay the bottles on their sides, that the cork may be kept moist by the water. To prevent fermentation and mould, the bottles must be turned once or twice a week for the first month or two, and once or twice a month afterwards. When applied to use, some of the liquor first poured off may serve to be put into the pie, or pudding, instead of water, and the remainder being boiled up with a little sugar, makes a rich and agreeable syrup.

The fruit ought not be cracked by the heat; some trials were made by keeping the bottles in a heat of 190° for three quarters of an hour, but the fruit was reduced nearly to a pulp. It is also advisable that the fruit be not quite ripe, nor should it be bruised.

Some fruits may be preserved in a succulent state by being kept in water, without boiling.—This is practised in regard to the cranberry: it also succeeds with the smaller kinds of apples.—All pulpy fruits, such as damsons, plums, &c., if gathered when not quite ripe, and not wounded, may likewise be preserved, by putting them into dry bottles, so as to exclude the air, by sealing over the cork, and then burying them in a trench, with the cork downwards.

CONSERVATION OF RECENT FRUITS, BY MEANS OF SUGAR, IN A LIQUID STATE.

A great number of fruits in their natural state may be conserved in a fluid, transparent syrup, of such a consistence as will prevent them from spoiling. This method of conserving fruits requires some care; for if they are too little impregnated with sugar, they do not keep, and if the syrup is too concentrated, the sugar crystallizes, and thus spoils the conserved fruit.

METHOD OF CONSERVING APRICOTS BY MEANS OF SUGAR.

Plums
Damsons
Green Gages

Peaches
Nectarines.

Take apricots, not too ripe, cut a small slit near the stem end of the fruit, and push out the stone; simmer them in water till nearly half done, then peel them, and simmer them again for about twenty minutes in a syrup, made of two parts by measure of water, and one part by weight of loaf sugar. When this has been done, put them aside for about twelve hours; strain off the syrup, and to one pint of it add four ounces of lump sugar, simmer the fruit again for about ten minutes in this concentrated syrup; skim off the impurities that rise to the surface, and repeat the simmering of the fruit in the syrup three or four times; and, lastly, put the apricots into pots, and cover them with a syrup made of seven ounces, by measure, of water, and one pound of loaf sugar. Tie over or cork the jar to exclude the air.

CONSERVED PINE APPLES.

Break off the top and stalk of the pine apple, cut the fruit into slices, about one fifth of an inch in thickness; put the slices into an earthenware jar, at the bottom of which has been previously put a layer of powdered lump sugar, about one-eighth of an inch in thickness. Place on this stratum of sugar, a layer of the slices of the fruit, then put another layer of sugar, and so on; lastly, put the jar up to the neck into a saucepan of boiling water, and keep the water boiling for about half an hour, or till the sugar is completely dissolved, taking care to remove the scum that rises on the surface. Tie over the mouth of the jar with a wet bladder, or keep it well corked.

CONSERVED PEARS.

Put peeled pears in a stone pan with water, let them simmer till they are soft, skin them, and when cold simmer them for about ten minutes in a syrup made of three parts by measure of water, and one by weight of loaf sugar, let them remain in the syrup till the next day; then pour off the syrup from the pears, simmer them again for about ten minutes, and repeat the simmering in the syrup three or four times successively. They are usually coloured red by powdered cochineal, a small portion of which is added during the boiling process. Some persons add cinnamon, and other spices, and a portion of port wine. If the pears be not intended to keep, they may be simmered till done in a syrup, composed of one pound of sugar and three pints and a half of water.

CONSERVATION OF RECENT FRUITS, BY MEANS OF SUGAR, IN A SOLID FORM.

The name of *candied fruits*, or *comfits*, is given to such substances as are preserved by means of sugar in a solid state, so that the whole substance is impregnated and covered with sugar, in a crystalline, or solid state.

CANDIED ORANGE, OR LEMON PEEL.

Soak Seville orange peel, well cleaned from the pulp in several waters, till it loses its bitterness; cut it into thin slips, simmer them in a syrup composed of two parts, by weight, of lump sugar, and one of water, and continue the simmering till they are become tender, and nearly transparent. Then take them out, put them aside for about twenty-four hours; and simmer them again in a sufficient quantity of a syrup composed of six ounces, by measure, of water, and one pound of loaf sugar, and continue the simmering till the sugar candies about the pan and peel. Now lay them separately on a wire sieve to drain; sift finely powdered sugar over them, whilst still hot, and put them to dry in a warm stove.

Candied lemon peel may be prepared in the same manner.

Natural History.

FROM THE N.Y. MEDICAL AND PHYSICAL JOURNAL.

Remarks on the Columba Migratoria, or Passenger Pigeon. In a letter to Dr, J. W. Francis, from De Witt Clinton, Esq. L. L. D.

ALBANY, April 24, 1823.

Dear Sir—The Columba Migratoria, or Passenger Pigeon, is a bird peculiar to North America. It extends its migrations from Hudson's Bay to the Gulf of Mexico, and it occupies occasionally that vast region which reaches from the Gulf of St. Lawrence to the Rocky Mountains. Its change of residence is not owing to the influence of heat or cold, of rain or drought, but is made with a view to the acquisition of food. The vast flocks in which this bird congregates, are unequalled as to extent. La Hontan says, that the Bishop of Canada has been forced to exorcise them oftener than once, on account of the damage they do to the products of the earth. Weld, an English traveller, speaks of a flock eighty miles long flying over Lake Ontario; and Wilson, the great ornithologist, estimates one seen in Kentucky, two hundred and forty miles long, a mile broad, and containing two thousand two hundred and thirty millions and two hundred and seventy two thousand pigeons, which would consume on a moderate allowance, seventeen millions four hundred and twenty-four thousand bushels of mast a day.

The gregarious habits and vast flocks of this bird will of course occasion a correspondent consumption of food; and it is therefore compelled to be constantly erratic, and to be among the feathered race what the nomades are among mankind. The rapidity of its flight is superior to that of the carrier pigeon which has been known to pass from St. Edmundsbury to London in two hours and a half. At this rate, the Passenger Pigeon can travel seven hundred miles in twenty-four hours; and at the rate of a mile a minute, the same distance in less than twelve hours: and this velocity may account for undigested rice being found in its craw six hundred miles from the rice fields; but as this has been observed in the spring of the year, it must have been derived in that case from the gleanings of a former season, or procured at a greater distance, or confounded with the zizania aquatica of the western waters. The favourite food of this bird is the beech nut, and it prefers to establish its roosting quarters and its breeding place within the reach of this aliment. It also subsists on the acorn, chesnut, wild cherry, seeds of the red maple, and of some weeds, poke, and other kinds of berry, buckwheat and the principal cerelia. It resorts to the sea shore and the salines of the west for salt, and it is frequently seen at the mineral springs of Saratoga enjoying the luxury of the waters.

This bird is in much request as an article of food; and in the spring it arrives at an opportune period for our markets, during a scarcity of domestic poultry, and in the interval after the consumption of most of the old stock, and before the maturity of the new brood. In the hard winter, as it is commonly called of 1741, the weather was intensely cold from the middle of November to the latter end of March. The snow was six feet deep. The Hudson River was passed on ice at the city of New York. The cattle perished; and the deer were starved for want of food. The prices of food and fuel were exorbitant, and the sufferings of the poor were severe. In this crisis, and five or six weeks earlier than the time of their usual appearance, flights of wild pigeons appeared in greater numbers than were ever before known, and which, by the abundance of the food thus afforded, greatly relieved the prevalent distress. This at the time was attributed to a special interposition of Providence, under a supposition that this bird is incapable of resisting severe cold; and this is now the general impression, which shows that its nature is not well understood. It has been seen at Hudson's Bay in the month of December, and large flocks were observed in Albany and the north western parts of this state in January and February, 1819.

There are other errors with respect to this bird. It is generally believed, that it will not breed in captivity, and that it is incapable of domestication. And our distinguished ornithologist, Wilson, has unhesitatingly asserted, that it only has one squab or young at a time.

If this latter position were true, it would furnish an anomaly in ornithology. All birds of the Columba genus, have heretofore been supposed to produce by pairing, and to have two young at a time, generally a male and female. The male pigeon participates in the labours of nidification and incubation, supplies the female with food when on the nest, and assists in feeding the young. But where polygamy prevails among birds, the whole labour devolves on the mother. The domestic or exotic pigeon lays two eggs at a time; and our only indigenous birds of the Columba genus, (besides the Passenger Pigeon,) the turtle dove and the ground dove, do the same. Why then should the Passenger Pigeon be an exception? The male assists in building the nest, and occasionally relieves the female in incubation; and it is remarked, that in the breeding season, the two sexes are never seen together. This is owing to their divided labours: for the male makes up for the greater devotedness of the female to incubation, by occasionally supplying her and the young with food. We then can see no reason for so strange a departure from the general rule, attributed by Wilson to the Passenger Pigeon in the extent of its production: and when we further consider the prodigious flocks of this bird, transcending all other collections of birds, we cannot easily acquiesce in his opinion, especially as he admits that it only produces three or four times in a year. But there is no reasoning down facts, and this is a question of fact. On diligent inquiry, I am satisfied that Wilson has been misled by inaccurate information. Benjamin Wright, Esq. one of the principal engineers on the Erie canal, says in a letter dated the 14th of August, 1822, " Wilson is under a great mistake when he asserts that the wild pigeon has but one young. I am confident of seeing, when a boy, two eggs in the same nest. In order to be certain that my memory was not treacherous, I have consulted Mr. Green, a man of observation, and famous for taking pigeons. He is also positive that two eggs and two young are often found in one nest. He says, that the nest is built with little twigs loosely put together, and that the eggs frequently fall through, but that he is confident of observing, when only one egg could be found in the nest, that the other could be discovered to have fallen out of it." Mr. Wright, some months after this communication, informed me that subsequent inquiry had confirmed, in this respect, the accuracy of his impressions.

David Thomas, Esq. another principal engineer and a distinguished naturalist, in a letter dated 22d August last, says,

" I have not ascertained any particular fact relative to the young of the wild pigeon, though the common opinion is that it has two at one time."

But to remove all doubts on this question, I shall now mention an experiment successfully tried by Mr. Paul Clark, a respectable citizen of Albany.

This gentleman informs me that he has frequently seen in the woods, two eggs and two young in the nest of the wild pigeon. He has tried, for many years, to breed pigeons from those caught in the net, and has never succeeded. At last it occurred to him to vary the experiment. He took a female squab from a nest in the woods and brought it up in a cage. He put with her a male which had been taken in a net, but having been caged for three years, it was quite tame. They were placed in a wide and high coop, about which they could fly, and a small pine tree was planted in it, upon which they built a nest and bred, and their offspring kept in a similar way, have also produced. Last year two pair began to breed in May, and continued until September. One pair produced seven and the other eight times. Thirteen of the young survived. They laid sometimes one, but oftener two eggs for the same sitting. The confinement prevented in Mr. Clark's opinion, a greater increase. In twenty-three days from the laying of the eggs the young ones could fly; and in eight days from their being hatched, they are completely feathered, and fly from the nest; whereas the tame pigeon is hardly feathered in eight days, and according to a memoir of M. Tessier, to the Royal Academy of Sciences, of Paris, its period of incubation is from seventeen to twenty days. Latham, in his general Synopsis of Birds, says, that the domestic pigeon, Columba domestica, or Columba Oenas of Linnæus, has, in its wild state, not more than two broods in a year, but after being domesticated, ten or twelve. Other writers say but eight or nine.

The difference between our wild pigeon, and the tame pigeon in its wild state, is, as to productiveness, greatly in favor of the former. It breeds, it is believed, twice as often; its period of incubation is shorter; its produce the same as to number, and its young arrive sooner to maturity, and, in an unreclaimed state, it vastly transcends the pigeon of the old word in number. If Mr. Clark's experiment shall be more extensively realized, so as to secure the residence of the American pigeon in an open pigeon house, then it will be an important addition to our domestic poultry. This is its appropriate climate, and domestication will enlarge its size, and augment its productiveness. The parent stock of the tame pigeon, and all its twenty beautiful varieties of carriers, pouts, nuns, owls, fan-tails, tumblers, &c. is the stock dove, or Columba Oenas; and this bird, in its wild state, does not exceed thirteen and a half inches in length, and twenty-two in breadth; whereas, our wild pigeon is sixteen inches in length, and twenty-four in extent.* Domestication will have the same effect on the character and beauty, plumage and variety, fertility and usefulness, of our wild pigeon, as it has had on that of the old continent. According to Pliny, if you suppose two pigeons to hatch but nine times a year, they may produce, in four years, fourteen thousand six hundred and seventy young. Our pigeon, if Mr. Clark's experiment fully succeeds, will be more productive.

The tame pigeon is whimsical and fluctuating in its attachments to home. It prefers according to Buffon, elevated buildings, and habitations on elevated ground. Trifling circumstances will sometimes induce it to abandon its home, and it has even been known to change its partner in the most capricious manner. A person in Albany had two tame pigeons in a coop; the female was on the nest. A strange female visited the inside of the coop, and a courtship took place with the male, which was resented by the wife, who came out from her nest and made a great noise.—Finding her efforts unavailing, she left her house in the course of a week, and the stranger occupied her place. What is called a *sait eat*, which is composed of loam, old rubbish, and salt, will entice pigeons to remain where they are and allure them from other places. Assafœtida, common salt, and a looking glass, are said to have a similar effect, and plenty of food deposited in their houses, will check their truant propensities.

Although some birds are peculiarly wild, and have never yet been domesticated, yet it may be observed, generally, that they are more tameable than quadrupeds. The latter flee from man, while the former gather round cultivation. The attainment of food is the efficient cause of this approach to the habitations of men; and if Mr. Clark shall, by proper treatment, and a judicious application of appropriate allurements, carry his experiment to completion, as it respects permanence of residence, as well as breeding he will be entitled to the credit of having tamed for the benefit of man, an animal more useful and productive, than its congener, the tame pigeon, which has been prized as an important acquisition since its first domestication. Columella says, that in ancient Rome, four thousand nummi, (which is upwards of one hundred and forty-three dollars,) have been given for a pair; and Pococke observes, that a pigeon house is considered a great part of the estate of the husbandman in Egypt.

D. W. C,

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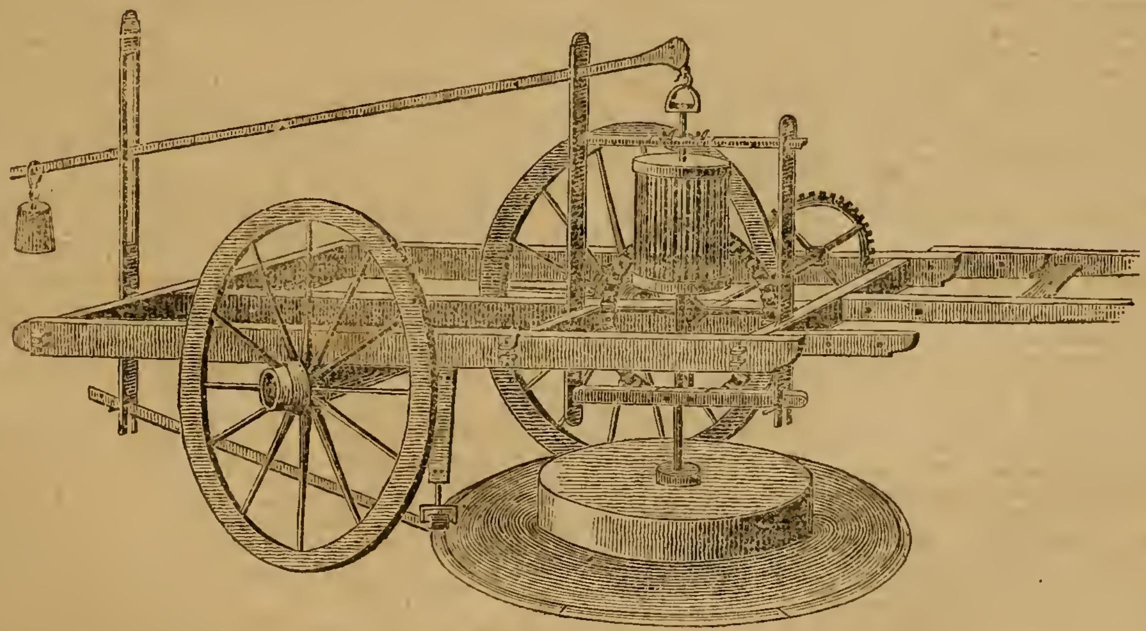
* *Vide Montagu's Ornithological Dictionary, and Wilson's Ornithology.*

FROM THE PHILADELPHIA AGRICULTURAL ALMANACK OF 1823.

THE MOWING MACHINE.



THE MOWING MACHINE,

Of which the annexed cut is a representation, was invented by Jeremiah Bailey, of Chester county, who has obtained a patent for the same.

It has been extensively used and approved of during the last season, in the neighbourhood of the patentee, and promises to be of great public utility. It is understood that it will mow ten acres per day. The following description will explain its operation and shew the skill and ingenuity of the inventor.

This machine is supported by two wheels on different axles. The left wheel is fixed to its axle so that they revolve together. The right revolves on its axle like a common cart wheel, and is placed about a foot further back than the other. The left works within the frame and has a circle of cogs screwed on the outside of the fellows, but of a less diameter, to keep them from the ground. These cogs work into a vertical cog wheel in front, that turns an iron shaft extending horizontally towards the centre of the machine: upon the inner end of this shaft is fixed a vertical fuce wheel, whose cogs turn a trundle head or a vertical shaft. To the bottom of this shaft, near the ground, is fixed a circular horizontal frame work, on the circumference of which is screwed the scythes in six parts, laid horizontally, with the edges turned outward, so as to form a complete circle. To keep the scythes at a proper distance from the ground, the bottom of the shaft is supported on a piece of wood of the machine, secured by a tye from the tail, somewhat resembling a sled runner in which it works in the manner of a gudgeon—with the inequalities of the ground, the scythe frame, shaft and trundle head rise and fall.

The edge of the scythe in its revolution passes under a whetstone fixed on an axis and revolving with the scythe. To create friction, this axis is more or less inclined to the line of direction of the revolution according to the friction required. This stone, by means of a sliding rod, by which it is attached to the machine, rises and falls with the scythes.

To prevent too great a pressure of the trundle shaft and scythe frames on the ground, a lever like a steel-yard is fixed to the top of the shaft, extending to the tail of the machine where it is weighed according to the nature of the ground and grass.

The horse is put into shafts and *walks* in front of the left side of the machine, and always on the mowed ground after the first swarth is cut.

By the increase of velocity, the scythes revolve with great swiftness. The grass as it is cut is first thrown by the progressive motion against a rise in the sythe-frame toward the centre, and by the same motion, is afterwards thrown off in a regular row, following the centre of the machine.

EXTRACTS FROM LATE NUMBERS OF THE

London Farmer's Journal.

ON MANURE.

Hunton, *Dec.* 14, 1821.

Induced by Mr. Wright's questions, and your own note thereon, I presume to send you a few observations in reply. To the first question, as to the proper depth of covering manure, I conceive the shallower the manure, be it of whatsoever kind, is buried in the soil, the better; but, at the same time, it is necessary that it should all be covered with the natural soil, if possible. In answer to the second question whether exposure to the sun by frequent ploughing in summer, benefits or injures, the land; I have no hesitation in saying, that it is decidedly beneficial to all soils, but by far most so to those of a heavy and tenacious kind. As to what are the benefits land derives from summer fallow, I have to reply, that they are various in nature and degrees. The benefits I have witnessed are these;—to expose the insects. which prey on vegetation, to devouring birds to give greater effect to that primary source of warmth and life, and fertility, the sun; to destroy noxious roots of weeds, and to bring the earth to a pulverised state, on which the genial rains can act with greater effect. These advantages follow on light soils, and on heavy tenacious lands, they are experienced in a much greater degree; indeed, the heaviest soils become barren without summer fallowing. As to the next question, which embraces so wide an inquiry, I must leave it to better-informed persons than myself. The last question I will presume to answer, by assuring the enquirer, that no crop of any kind can ever render the soil so fit for the same course of crops again, as if summer fallowed; for there is no growing crop whatever, but must deprive the land of some portion of its fertility, unless accompanied or immediately followed by manure.

ON FEEDING WITH MANGEL WURZEL.

Kilton, *Dec.* 28, 1821.

Sir—I perfectly agree with your correspondent *P.** in his answer to *M. W.* in your last Journal, as to the value of Mangel Wurzel as food, not only for sheep, but also for bullocks, pigs, &c; but experience has taught me that it should be used with caution at the commencement of feeding, that is, a small quantity *only* should be given: I therefore offer *M. W.* the result of *my* experience in the use of it.—The frost and snow of the winter 1820, depriving me of my other succulent food for my breeding ewes, I was obliged to make use of the store of Mangel Wurzel, which was placed in troughs; *hay* was also allowed. Not having given any to ewes before, I was induced (in consequence of the Holkham cows being palsied a few years since, and having witnessed similar effects in my own) to notice particularly the effect: some of them fed voraciously; these, in a short time, sickened, and in a few days began to lose their wool, and a part became quite naked; those were also the first that weaned their lambs in the spring. I would therefore recommend to *M. W.* to give his ewes near the time of lambing, and those recently lambed, but a small quantity, increasing it as the lambs increase in size, as experience has convinced me, that to create, *by any succulent food*, the greatest possible flow of milk in the ewe, when the lamb is young and not able to draw the whole quantity from the udder is a bad practice of shepherding.

As Mangel Wurzel stands, in my opinion, pre-eminent of all cattle crops, and having been a cultivator of it several years, and having tried several modes of cultivation, I intend the first opportunity, to detail for your service, the mode I found most successful. I am, Sir, Your's truly.

C. ADDAMS.

P. S. As a specimen of the ability of farmers being enabled to drink their "pint of wine," or their "noxious dram," as your Hampshire correspondent describes in your last Journal;—at a sale of farming stock, a few days since in this county, (Somerset), distrained for rent (now a very common practice), a pig which was stated to be near or quite three months old, was knocked down at only one sixpence! and another at 1s.: the other stock was sold at or less than one third of the price it would have made seven or eight years since.

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* *See American Farmer, vol.* 5, *No.* 22, *p.* 175.

CHALLENGE FROM THE HEREFORDS.

Lynch Court, *June* 25, 1823.

Several challenges having been offered at different times to show Short Horns against Herefords, I am induced to make an offer, which if accepted, I am inclined to think, would go farther to throw some light upon this interesting question, than could be obtained by the bringing of single animals of a particular description into opposition. A man may by accident, or by superior keeping, possess a very excellent animal, whose general stock may be nothing extraordinary; but if the whole or the greater part of his breeding stock is found to excel, he is fairly entitled to pre-eminence. I wish to bring such a portion of my breeding stock into competition with any other breed, as shall afford a fair specimen of the whole, without being so numerous as to render their exhibition seriously inconvenient. I therefore hereby offer to shew two bulls, two cows, two three-years-old heifers, two two years-old ditto, two yearling ditto, two heifer calves and a bull calf. I would have made it two bull calves, but I have only two, and one of them has met with an accident, and will probably be too lame to travel. In order to take in all persons who may wish to accept this challenge, I profess myself willing to shew my stock for any sum not exceeding one hundred guineas, or merely *pour l'honneur*, or, as we say in English, *for love*. The stock to be shewn at Sir Charles Morgan's next show: none of the cattle to have had any milk except what was afforded them by their own dams, and none to have had cake or corn in any way, since they were four months old (except the bulls) and to be the property of the person accepting the challenge at the date of this letter. As my object in making this offer is avowedly to establish the excellence of the Hereford breed of cattle, my challenge only extends to those of *other breeds*.

I remain, Sir, your obedient servant,

J. R. SMYTHIES.

Editorial Correspondence.

Extract to the Editor, dated

Lancaster C. H. (Virg.) 27th May, 1823.

"I have recently passed through several of the upper counties of this State, and never in my life saw such promising corn crops. From a field of about fifteen acres, Major Peter, the proprietor, expects to make twenty-five barrels to the acre. The corn was planted in double rows about eighteen inches apart and eighteen inches in the drill, two stalks in a place; a space of five feet then intervened, the double rows as before, and so on through the field."

Charleston, *September* 1, 1823.

Dear Sir,

Permit me to request you will correct a typographical omission, at the conclusion of my letter of the 9th July, inserted in your paper of the 22d August, No 22; upon the subject of the Isle of France Cotton.—"It is yet in blossom,"—it ought to be as in the manuscript—"It is *not* yet in blossom." At this advanced period, cotton of every description is in bloom—our Island Planters are at present piching 40 and 50 pounds to each negro per day.

I visited my plantation a few days ago.—The Isle of France cotton, of which I have about twenty or thirty stalks, had grown to the height of five feet, and had branched out very much—it was *not even yet* in blossom—I do not think it will answer in our climate.

I remain, very respectfully,

CHARLES E. ROWAND.

J. S. Skinner, Esq.

THE FARMER.

Baltimore, Friday, September 12, 1823.

☞ Hedges.—We have been informed that the modern practice in England, is to trim hedges to the shape of the wedge,—point upwards.—The object is to ensure to the whole surface an equal action of sun and air, and by that means an uniform verdure and thickness. In the usual square form, the sides and bottom part are shaded, while the sun shines full upon the top—hence so much irregularity in the verdure and growth, spoiling the appearance and destroying the strength of the hedge.

LATE FROM FRANCE.—The ship Paris, Captain Robinson, has just arrived from Havre, from which port she sailed the 1st of August.—We have received Paris dates of the 29th, and London of the 27th.

A battle had been fought at Corunna, in which the French were defeated with the loss of 700 men. Sir Robert Wilson had been wounded in this engagement. Things did not look as well in France as formerly—the people having expressed complaints of the tardy operations of the armies in Spain.

Cotton has risen in Havre, in consequence of the rise in England—New-Orleans 27 to 33 sous, Upland 25 to 28.

BALTIMORE MARKET.

PRICES CURRENT—corrected weekly.

Flour, best white wheat, $7—Howard street, from wagons, $6 37½—Superfine, $6 50—fine do. $6 25—Wharf, do. $6 00—White wheat, $1 14 to 1 25—Red do. $1 05 to $1 12—Rye. 45 cts—Corn, 36 a 39 cts.—wharf Oats, 25 a 26 cts.—wagon Oats, 28 cents—Beef, 8 cents per lb—Live Cattle, $6 to $6 50, per cwt.—Bacon, hog round, $10—Pork, $4 50 to 5 50 per c. lb., 6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, retail, $1 50, cargo price, 1 12½—Peas, retail, 75 a 80 cts., cargo price 58 a 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, [illegible] to 36 cts. per gal. including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl., No. 2, $2 37½—Fine Salt, 60 to 65 cts. per bush., coarse, do. 70—Butter, (firkin) 14 cts. per lb—Eggs, 10 cts. per doz—New Hay, $15 per ton, old do $18—Straw, $10.

Maryland Tobacco.—No sales.

Prices of fresh seeds at Philadelphia.

Clover $7—Timothy, $3 to $4—Orchard, $2—Herd, 7[illegible] to 100 cents—Millet 50 cents.

AGRICULTURE.

INTERESTING EXTRACTS—*from Agricultural and other addresses, memoirs, &c. on the files in the office of the American Farmer.*

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FROM AN ADDRESS DELIVERED BEFORE THE AGRICULTURAL SOCIETY OF NORTH CAROLINA, DECEMBER, 1822, BY DR. R. H HELME, OF JOHNSTON COUNTY.

* * * * * *

The low estimation in which agriculture has heretofore been held in this country, has militated much against its encouragement and improvement; it has been confined to those chiefly who were ignorant of its first principles, although some individuals of scientific acquirements are engaged in what *they* call farming, yet in nine cases in ten it is with them a secondary object; their attention is taken up with some more lucrative and fascinating pursuit than the dull and monotonous labor of tillage. Every parent who can give to his son an education above that of mediocrity, sees with eyes of parental partiality in this son, the germ of a great man, and he would think it a culpable neglect of his duty, a derogation of his fatherly discernment, and a blighting frost to the budding genius of his son, were he to make any thing less of him than a lawyer or a doctor; *but of the many lawyers and doctors that are called, how few are chosen*; little does the blind and fond parent think that in placing his son in a sphere nature never intended him to occupy, he is entailing upon him misery and disgrace; how many are there this day of thirty, forty, and fifty years of age, who repent in bitter agony this misapplication of talents; as farmers, as mechanics, they might have been respected and honored in their stations, but having spent their youths in the pursuit of an object beyond their capacity to reach, they are at this day unfitted for the one or the other, displeased with themselves and envying those who outstrip them in their professions, they will go down to the grave "unwept, unhonored and unsung." The minds of men are not all cast in the same mould, nor fitted to follow in life's devious path the same pursuit,

"For not alike to every mortal eye
Is this great scene unveil'd. For since the claims
Of social life, to different labors urge
The active powers of man; with wise intent
The hand of nature on peculiar minds
Imprints a different bias, and to each
Decrees its province in the common toil.
To some she taught the fabric of the sphere
The changeful moon; the circuit of the stars
The golden zones of heaven; to some she gave
To weigh the moment of eternal things.
Of time, of space, and fate's unbroken chain,
And will's quick impulse. Others by the hand
She led o'er vales and mountains, to explore
What healing virtue swells the tender veins
Of herbs and flowers, or what the beams of morn
Draw forth."—

To place agriculture upon that high and honorable ground, which it ought to sustain, and to make the knowledge of it worthy the ambition and the pride of the youths of our state, there ought to be established a Professorship of Agriculture in our university. If I am not misinformed, the pecuniary situation of that institution is amply sufficient for the purpose, and if it is not, I certainly believe that the present legislature emphatically styled the collected wisdom of the state, representing with others, the agricultural interest of the community, would give their undivided support to a measure, as I humbly conceive, wise in its project, and beneficial in its ends. The Agricultural Society of Albemarle, in Virginia, have proposed such a measure to the citizens of that state, and Mr. Madison has undertaken to see it carried into effect. With such a noble example before us, we ought not to hesitate.

Were the funds of this society sufficient, I would recommend the appointment of a skilful and scientific agriculturist, assisted by Professor Olmstead, of our university, as a geologist, to make an agricultural and geological tour of the state; it would tend much to the promotion of our art, and have a happy influence in harmonising the jarring interests which now divide its western and eastern sections. As connected with the advancement of agriculture, good roads and navigable streams, are of primary importance; but to carry this object into effect depends upon those who hold the purse strings of the state. Upon the internal improvement of the state much money has been expended, and little benefit derived: public excitement is aroused, and I am fearful public opinion is against it. In my humble opinion, if those who have had the superintendence of the improvement of our rivers had begun at their mouths and worked against the stream, they would have brought with them the good wishes and the purses of the people. Instead of seeing the members of the legislature, for fear of losing their seats, voting against a measure of such vital importance to all classes of the community, you would see them vieing with each other who should be most zealous in its promotion. I am sorry to say that we are deficient in state pride, and have borne the scourge of ridicule from our sisters of the union, until we have become insensible to the smart. Look at New York, she has brought the lakes to the ocean, and the mountains to the sea board; she has opened her treasury for the encouragement of agriculture, and by the sound policy and political wisdom of her rulers, she is destined to become the greatest agricultural and commercial state in the union.

* * * * * *

It becomes necessary for farmers in their endeavours to improve the husbandry of the state, to relinquish the old method of shallow ploughing up and down hills, and taking from the land for a succession of years, a crop of the same kind: to this injudicious method is it owing, that so many barren "old fields" lay waste. Few farms in the hilly part of our state are intrinsically worth, by fifty per cent. as much as they were twenty years ago. By shallow ploughing, the soil of hills has floated down our rivers, fertilizing their banks, choking their channels, and stopping their mouths: deep and horizontal ploughing, a judicious, rotation of crops, and a liberal application of manure, will yet restore them to their former fertility. Our farming utensils are, in the general, illy calculated to answer the purposes for which they are intended; like the mechanic, the farmer cannot do good work without good tools.

There is no better evidence in any country of the state of its agriculture than the appearance of domestic animals. To judge of North-Carolina husbandry by this criterion, the result would not be much in its favor. Maryland is retrieving fast her former supineness, by her Agricultural Societies, her Fairs and cattle shows, and the great attention she is now paying to the improvement of neat cattle, horses and mules. These societies are creating a new era in the agricultural history of this country.—Ours is the only one whose beneficial influence has not extended beyond the walls of the room in which we meet. Why so much apathy in a cause so important to ourselves and our country? We may meet here once a year, salute, shake hands, and depart; but unless we do something more efficient than we have done, little good will agriculture derive from our labours. Why cannot we have a Fair and Cattle Show in the city of Raleigh? (I name this place as being near the centre of the state.) Once commenced it will grow of itself; and the advantages to be derived from it to agriculture will be incalculable—If our funds are not sufficient to meet the premiums we may wish to award, petition the legislature now in session for assistance, and I have no doubt that a body so wise and patriotic will not hesitate to grant it. Let *us*, however, recollect the fable of Hercules and the wagoner.

The geological knowledge that I possess of this state is confined to a small portion. This city is the western boundary of my travels. I should feel great satisfaction in being able to communicate to you the different soils that variegate its surface.

From this to the Atlantic the predominant constituent of the soil is silicia, or sand. The margins of our rivers, which is the most productive lands I have seen in the state, afford, upon analysing, sand, lime, clay, and that dark powder which is the effect of decomposition of dead vegetable and animal matter, called by Davy an extractive matter, and by the French chemists, Terreau.

Probably there is no State in the Union which would afford a greater diversity of soil than ours, or which is better adapted to the purposes of agriculture. Almost every plant necessary to our immediate want or comfort, that will grow this side of the tropics, will flourish here. It was thought for a long time that the cotton plant required a warmer climate, and more congenial soil; experience, however, has proven the fallacy of this opinion. The cotton of North Carolina sustains as fair a character in the European markets as any upland cotton in the union.

This plant known in Botany by the name of Gossypium Herbaceum, is a native of the East Indies, and by that great naturalist, Linnæus, is arranged in the sixteenth class of his sexual system, Monodelphia, (or one brotherhood) which not only embraces vegetables of the smallest but of the most stupendous size. The dimensions of the Bombax Petandrum, a tree of Africa, is incredible to those who have not made natural history their study. According to the account of William Bosman, who saw it in its native soil, it would afford shelter to an army of twenty thousand men, without incommoding each other under its branches.

"Nature! great parent! whose unceasing hand
Rolls round the seasons of the changeful year,
How mighty, how majestic are thy works!"

I have little doubt but that the sugar cane might be brought to assimilate to the climate of this state. It is a wise provision of Providence, and calculated to draw from us the warmest feelings of gratitude to the great Giver of all Gifts, that vegetables necessary for our subsistence are made subservient to our industry and perseverance. Wheat, which has been aptly styled the king of grain, and which constitutes such a large proportion of the bread-stuffs of the civilized world, flourishes beneath the soft and vivifying beams of an Italian sun, and lives in the icy fetters of a Canada winter—It has followed civilized man, in his migrations from the fertile banks of Euphrates,

"To where dread winter spreads its latest glooms
And reigns tremendous o'er the conquer'd year."

Naturalists inform us, that so influential is the power of climate and cultivation over the habit of vegetables, "that when transplanted into cold climates, many of the perennial plants become annular, and the species are perpetuated by seed. Thus in its native warm climate, the Ricinus Communis, or Castor Oil plant, has a shrubby stem, and is a perennial, but in cold climates both the root and the stem perish, and the vegetable is continued by its seed." Evergreens, when carried from a cold to a warm climate, become perdifols, and vice versa. The Quince tree is a perdifol in cold climates, but becomes an evergreen when transplanted to Italy and the south of France; and professor Barton has informed us, that "that truly beautiful vegetable, the Franklinia Altamahaw, since its first introduction into Pennsylvania, has changed its time of flowering nearly two months." The oaks and the poplars of Europe, when carried to the Cape of Good Hope, put forth their leaves on one side of the equator, while they are shedding them on the other. If vegetables are thus made to bend to the force of climate, is it an idle conjecture to suppose that the cane or the olive might be made to mature here? The cultivation of the vine would be both a pleasing and profitable business. I know nothing of its culture from experience, but am warranted in saying that both soil and climate are suitable to its growth. Our forests teem with indigenous vines, and I have no doubt, were they properly tamed and controlled by cultivation, their produce would equal the wines of Europe in flavor and quality. "The vinous latitude extends from 25° to 51° north." The cultivation of the vine is of high antiquity: "Noah planted vineyards and made wine." The heathens deified Bacchus for having learnt them the uses of wine. The Grecians and the Romans paid great assiduity to its culture. Plato says that wine is the most invaluable gift of God to man. Portugal, France, Switzerland, Germany, Spain and Hungary cultivate the vine with great success. The island of Madeira exports annually about 35,000 pipes of wine, which costs in this country from three to six dollars per gallon. The cultivation of the vine commenced in that island about four hundred years ago, when the first cuttings were carried there from Cyprus. France at present excels the rest of Europe in this branch of Agriculture, and it is supposed the brandies made from the grape in that country produces annually from eight to ten millions of dollars.

Agriculture in its slow and sober movements, teaches us economy, temperance and frugality. The prudent farmer looks unmoved upon the fickle goddess of fortune, as she sports with the feelings of those who flock to her temple, but pities the subjects of her waywardness. *Few indeed are the instances in this country of a farmer's becoming insolvent, who has devoted his whole time and attention to the pursuits of his vocation, and been contented with its slow but sure gains.*

The riches of a moment's growth, in a moment takes wings and fly away; but that competency which is the reward of honest industry travels with us to the grave, and certainly if there ever was a country which held out inducements to the husbandman to exert his industry and enterprise, it is this—the land of liberty and the abode of freemen—our civil, political and religious rights secured to us by a government whose foundation rests upon the will of the people, and so long as that adamantine chain of unanimity which binds together the north and the south, the east and the west, shall remain unbroken, it will continue to be

"The land of the brave, and the home of the free."

December 16, 1822.

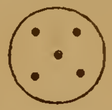
FOR THE AMERICAN FARMER.

ON THE CULTURE OF SEA KALE.

This is a deep rooting plant, and therefore requires a good depth of soil, either of a sandy or light loose loamy nature: if it be not naturally this, it should be made so by trenching it two and a half feet deep, and then it may be made after the manner of an asparagus bed, but it will not, like asparagus, require a repetition of manure afterwards, except for forcing.

SOWING.

The bed may be four and a half feet wide, and when ready for sowing, stretch a line lengthways the bed, and one foot on from each side, and along these two lines at the distance of every two feet, mark a circle of five inches diameter, in which plant five seeds thus, two inches deep; if two beds are wanted, a second may be made and planted in like manner, alongside of the former, with an alley between them of eighteen inches wide. This should be done in the fall.



First year's management.

In the spring the seeds will vegetate, and as they appear, protection should be given them against the turnip fly, which otherwise will soon destroy them. In about a month or six weeks the plants will become sufficiently strong to withstand the ravages of the fly, and then three only of the strongest plants, should be suffered to remain in each circle, and the rest removed and planted out with their tap roots perfect, either to supply vacancies or form another bed if required.

The plants should be plentifully watered in June and July, and kept free from weeds through the summer, and in the fall as soon as their leaves are decayed, clear them away, and cover the beds over evenly, two or three inches thick, with sand or light loose earth, which finishes every thing for the first year.

Second and subsequent years.

None of the plants should be cut this year, but as some of them will rise strong, and throw up flower stems, these should be nipped off as long as they appear, unless seeds are wanted. The beds are to be kept clean from weeds through the summer, and all decayed leaves removed and cleared away in the fall, and this practice should be followed in all succeeding years. As the plants will henceforward allow of being cut every year, the autumnal covering to the beds, now and hereafter, must be adapted to the mode in which it is intended, the plants are to be blanched. If according to the two first methods after mentioned, then the fall covering may be the same as in the first year, and sticks should be fixed in the centres of the circles to mark the places of the plants, that the blanching pots after described, may be placed exactly over them; but if they are to be blanched according to the third method, then the fall covering should not be less than eight inches thick.

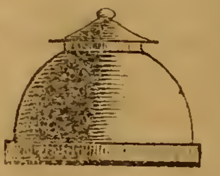
The following are the three modes of blanching.

First method.—About the middle of March, place blanching pots over the circles marked by the sticks; remove the sticks, and press down the pots firmly and close on the ground—then cover the whole bed, pots and all, with fresh stable dung three feet thick, extending it outwards from the sides and ends of the bed two feet, and pressing it down close in all places, particularly between the pots, and fix heat sticks at proper intervals to ascertain the heat of the bed. Examine the progress of the plants from time to time, which may be done by carefully uncovering the dung from over the top of any one pot, and taking off the lid, and immediately replacing the same, and the removed dung upon it. The middle of a mild day will be the best time to do this. When any of the plants have filled the pots, which they will do in the space of a month or five weeks, according to the heat of the bed and state of the weather, they may then be cut, and in doing this care should be taken not to injure the hearts of the plants. The pots should be replaced over the crowns of the plants as they are cut, but they need not be again covered with the dung; nor should the lids remain on the pots but for two or three days afterwards, according to the weather, that the plants may be inured to the open air as soon as may be, and when all the plants have been cut, and become gradually exposed to the air, the dung and pots should be wholly cleared away, and the plants suffered to take their free growth, through the summer, and the following spring it will be adviseable to blanch them according to the second or third method.

Second method.—Put on the pots at the same time, and in the same manner as before-mentioned, and cut and treat the plants in all respects the same, except that no dung is here to be used for forcing, and therefore the plants will be much slower in blanching; but this will be an advantage, as by treating one bed thus, and another according to the first method, a successional and long supply of this delicious vegetable will be obtained.

Third method.—Here neither blanching pots nor dung are used, but the plants are suffered to come up through the autumnal covering, and as they appear above the surface, they should be immediately and carefully cut; but the plants thus blanched will not be so pure and delicate as those raised by the two first methods.

BLANCHING POTS.



These are earthen pots of the following shape and size, viz.: eighteen inches inside diameter at the bottom, nine inches inside diameter at the top, and fifteen inches high, with a lid to take on and off These pots, when not wanted for blanching, will answer for protecting melon plants from late frosts, and for forcing and screening newly transplanted flower and other plants from the sun, and other purposes.

C. S:

August 30, 1823.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

FENCES—COMPARISON OF DIFFERENT KINDS.

Sharon, 8th September, 1823.

In the 22d number of your work, vol. 5, there are some strictures from the pen of Mr Caleb Kirk, of Brandywine, on a paper which I read before the Agricultural Society of Buck's county, upon fences. Whatever censure is due to that paper, is applicable to myself alone; it bears my signature, and, therefore, neither the society in giving it up, nor you in publishing it, are in any way responsible for its contents—and as no argument has been adduced to convince me of error, I shall now offer some additional remarks.

Mr. Kirk arranges my objections to hedges, in the following order—1st, exhaustion of soil—2d, want of durability—3d, not hog-tight—4th, expensive.

His answer to the first objection certainly does not meet the case; he makes a distinction between a hedge-row, and a hedge-proper, and admits that the former has an effect on the adjoining soil, but he fails to prove that the latter has not; and is it possible that a hedge, such as he describes, of three feet in width and five or six feet high, so close as not to suffer a rabbit to pass, can grow without affecting the soil? to what extent is, perhaps, not clearly ascertained, but I presume that Mr. Kirk himself will acknowledge, that it amounts to the space actually occupied by the hedge. My meaning of a hedge-row, was simply a hedge planted in a row, but I hope I may now be permitted to speak a little of a hedge proper, although I have never seen one. I apprehend Mr. K. was incorrect in his inference that I publickly condemned hedges; I only took the liberty of expressing my opinion.

His second answer, as to durability, refers to the 3d volume of the Farmer page 118, where he says, "I have been able to trace them back half a century, under my own observation, without decay, and from other sources of information from Europe, three hundred years, and one case six hundred years." I would ask how long have they been growing in a "hedge-proper," for that is the test to determine their durability as to a fence; their continuance in Europe is no proof of their durability in this country, where the climate is essentially different, and where the insect tribe are making a most alarming inroad upon almost every part of the vegetable kingdom; nor is it now here, as it was half a century ago; for is it not a lamentable fact, that many of our valuable trees, which formerly flourished, are at this time in a state of decay. I make the inquiry as to the "hedge proper," supposing that Mr. K.'s knowledge for half a century, must have been in some other form, as he mentions that his first plashing was done in 1812.

To his third answer, I will only say, that I have no doubt but that the hedge he speaks of, would be hog-tight; nevertheless I have fears, that the great majority would be of a different description, say "hedge-rows," that could never be depended on as a protection from all kinds of stock.

His fourth answer, that "the expense alluded to, as a frightful thing, is all visionary," deserves particular consideration. I confess that he makes the cost of a hedge much less than I had supposed, but I think he omits a charge of some consequence, that is, the protecting fence; taking, however, his own calculation, I must still contend, that it is expensive, or not so cheap as the kind of dead fence, which I prefer. Now let us proceed to make the comparison. In volume 1, page 413, Mr. K. supposes that a farm of one hundred acres, will require 2500 pannels of post and rail fence—then a hedge three feet wide, of the same length, would actually occupy more than one and a half acres of ground, say nothing about exhaustion of soil, which I should suppose might reasonably be rated at half a perch wide, amounting in the whole to about four and a half acres; nor shall I notice the soil, that by "repeated dressing," is drawn from the adjacent ground to form the bank from twelve to eighteen inches high, as spoken of by Mr. K in volume 1, page 118—then 2500 pannels of ten feet each, will be equal to

1515 perches of hedge at 40 cents	$606
1½ acres of land, say at $50 per acre	75
	$681

Exhaustion of soil, and protecting fence not taken into account.

I prefer the post and rail fence, that is, locust posts with five chesnut rails; and I propose to plant the trees where they are not already growing, and I say that six hundred will grow on an acre of land, (see my calculations in vol. 3, page 160,) which will require one and a quarter acres to produce the 2500 pannels, then

1¼ acres of land at $50 per acre	$62 50
Making and putting up 2500 pannels, at 20 cents per pannel,	500 00
	$562 50

the price for making, is what persons who follow the business in this neighbourhood charge, but the work can be done by most of the farm hands, and the materials prepared in the winter season, and thereby the expense would be materially lessened.

Now the difference between Mr. Kirk's hedge, and my post and rail fence is $118 50, and I have stated the amount as much in his favour as I possibly can do. It is true that a hedge can be brought to perfection, sooner than chesnut and locust trees will mature; but let us take into consideration another matter, which, in my opinion, will very far outweigh that item. I suppose that a fence, with locust posts and chesnut rails, will last at least sixty years, (only requiring every third cutting of the timber,) which will allow the sale of two cuttings, and each yielding 15,000 posts and rails, or 30,000 together, estimated at five dollars per hundred, amounts to fifteen hundred dollars; and I apprehend, that there will be no difficulty of selling the surplus at that price, even if not wanted for fencing, and the locust can be disposed of at a much higher rate; then if an acre and a quarter of land will so produce, it is equivalent to twenty dollars per acre per annum, over and above fencing the farm; besides it is not at all likely, that the farm will be so destitute of fences, as to require more than half the first cutting, so that I think we may safely calculate upon a handsome profit from the commencement.

But it is said that my "project is all founded on theory;" now is it not as much a matter of fact, that locust and chesnut trees will grow from the seed or nut, as that a thorn bush can be raised from the berry? and it is equally clear that the former are very durable; they bear no more likeness to timber frequently used for fences, than a hedge-proper, is like a hedge-row.—An old farmer of this neighbourhood, of strict veracity, tells me, that he knows of chesnut rails, which are sound, at eighty years old. "A Subscriber," in volume 1, page 413, says "chesnuts will grow ten feet apart, and locusts six feet apart, and the latter may be cut every tenth year. Mr. Garnett in his address, as published in the Farmer, volume 4, page 49, says, "I also know, from my own experience, that either cedar, chesnut or locust, (the last of which is still more durable than either) will, in 14 years, grow sufficiently large, to make the fence anew," and there are other remarks upon fences in Mr Garnett's address worthy of attention; and I am happy to find in him, an individual, who has dared, publicly and pointedly, to disapprove of hedges; another serious, and as Mr. G. says, "insurmountable" objection to live fences is, the frequent changes of farms in size and shape, so as to render a new arrangement of the fences proper; in every such case, the hedge must either be grubbed up, at great labour and expense, or the owner suffer much inconvenience and be perpetually exclaiming, Oh that my hedge was in the right place! Further, it appears to me, that the annual expense of keeping up such a fence, as I have described, is a mere nothing, in comparison of trimming and dressing a hedge.

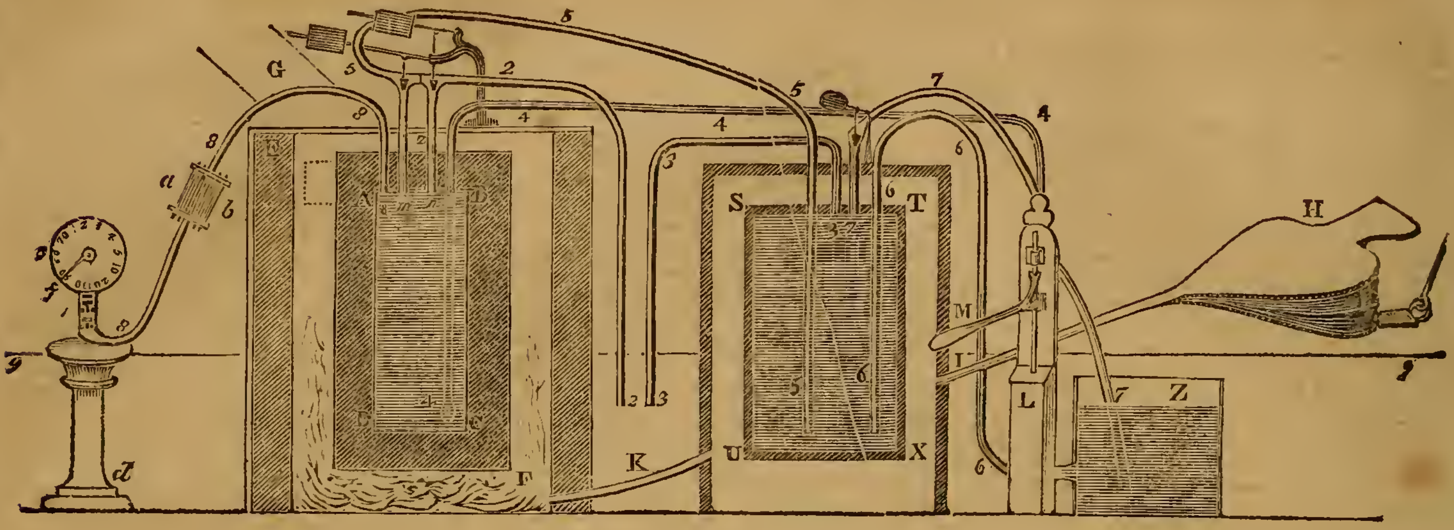
I was aware when I wrote my former essay, that I should subject myself to censure; as it seemed to me that a kind of mania with respect to hedges had commenced, which, if suffered to go on, might prove highly injurious to our country. I therefore felt it my duty then, as I do now, to bear my humble testimony against that species of fencing for general purposes; and although I may conceive that my essay has been treated with some degree of severity, yet, I am well pleased that Mr. Kirk has noticed it, because I hope it will be instrumental in inducing others to express their ideas upon that important subject; and whether he is, or I am, in error, I trust the public will decide correctly. I however beg to be understood, that I do not disapprove of hedges as ornamental; I have no doubt but that Mr. Kirk's hedge is a very beautiful thing; I only differ in taste from him as to the material; I prefer the juniper to the thorn, or indeed to any other live fence that I have ever seen, the former being a lively evergreen, easily and soon raised, grows very close and has prickly leaves.

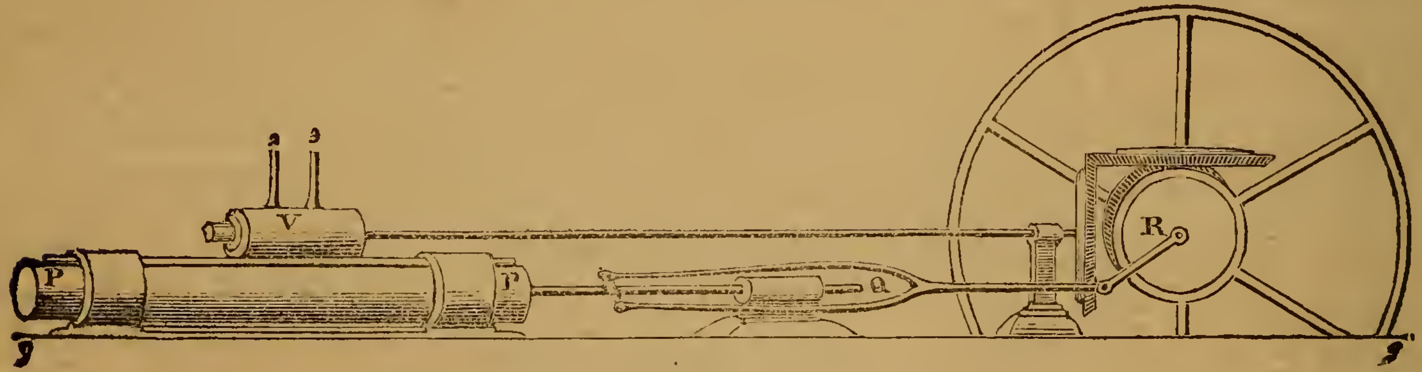
I also highly approve of Mr. K.'s manner of felling timber, that is, to cut all down without respect to size or age; for I have seen several instances of the great superiority of that mode—and I unite with him in opinion, that where stone is near at hand, that kind of fencing is preferable to all others, except in the case of sheep. Last year I put up about half a mile of stone fence, along the Nishamanly Creek—where my fences had before been carried off by the freshets. I placed it below the bank, in order to have it supported against the pressure of the water, and the creek, in time of floods, rises high enough, for timber and ice floating down, to pass above the top of the wall, without doing any damage—besides, the additional ground thus inclosed, about pays me for the fence. I think it is not necessary to make a stone fence higher than 3½ feet, and along the water edge 3 feet will be sufficient.

Your's very respectfully,
JAMES WORTH.

THE FOUR HUNDRED MILES' MATCH.

Powell's match to York and back, 394 miles in five days and thirteen hours, has been outrivalled by Mark Hawkins, the Lancashire man, who completed his task of 400 miles in five days and twelve hours, at half past eleven o'clock on Thursday morning. His progress up to Sunday night, the second day, has been stated at 152 miles. He went thirteen miles to breakfast on Monday morning, and at two o'clock he reached the two hundred mile-stone in sixty-two hours, in good health, and returned back to Chirk to refresh, and arrived 165 miles from London to sleep. On the fourth day he felt much inconvenience from blisters on the feet, which were relieved by introducing worsted through the blisters. He did 65 miles only this day, leaving himself the remaining distance at tolerable easy work. On the fifth day he arrived three miles from Oxford, at nine o'clock in the evening. He had 54 miles to perform, and appeared somewhat distressed. His stoppages were short, and he travelled but four miles and less each hour. He passed Gerrard's Cross at six o'clock, and did the match in half an hour within the time. It is the greatest pedestrian match on record.





DESCRIPTION OF MR. PERKINS' NEW STEAM ENGINE.

From the Edinburgh Philosophical Journal, for July 1823.

The generator, which supplies the place of the boiler in ordinary steam engines, is a cylinder A B C D, made of gun metal, which is more tenacious, and less liable to oxidation than any other. The metal is about 3 inches thick; and the vessel, containing 8 gallons of water, is closed at both ends, with the exception of the five openings for tubes, shown in the figure. The generator is placed vertically in a cylindrical furnace E F, whose chimney is G, the heat being sustained by a pair of bellows H, wrought by the engine, and conveying its blast in the direction I K to F. A heat from 400 to 450 degrees of Fahrenheit is thus applied to the generator, which is entirely filled with water. The valves in the tubes *m n*, which are steel cylinders working in hollow steel pipes, are loaded, the one with 37, and the other with 35 atmospheres; so that none of them can rise till the heat creates a force greater than the least of these weights.

Let us now suppose, that by means of the compressing pump L, whose handle M is wrought by the engine, water is forced into the generator; this opens the valve above *n*, loaded with 35 atmospheres; and instantly a portion of the heated and compressed water *flashes* out in the form of steam of high elasticity, and of a temperature of 420 deg.; and communicating by the steam pipe 2, 2, 2 with the valve box V, it enters the cylinder P P, lying horizontally, and gives motion to its piston P Q, which performs 200 strokes in a minute, and drives a crank R, which gives a rotatory motion to a fly wheel as seen in the figure.* When the eduction valve is opened, the steam, after having produced its stroke, is carried by the eduction pipe 3, 3, 3, into the condenser S T X U, where it is condensed into water at a temperature of about 320 degrees, and under a pressure of five atmospheres; from thence, by the pipe 6, 6, 6, it is drawn into the pump L, whence it is forced along the pipe 4, 4, 4, to the generator, thus performing a complete circuit.

The forcing pump acts with a pressure exceeding 35 atmospheres; consequently, when the water received in it from the condenser is urged into the generator, it must expel a portion equal to itself in volume—this portion, as above described, flashes instantly into highly elastic steam. The forcing pump, too, is so contrived as to act with a steady force, and consequently the expelled water must be driven from the generator in a steady current, and thus steam of a constant elasticity is supplied to produce the power.

Some philosophers are of opinion, that the heat of the portion of water which escapes is of itself sufficient to maintain the steam at that high degree of heat and elasticity with which it reaches the piston—and consequently that this engine is nothing more than a High Pressure Engine. Other persons, however, have supposed, and we confess we are among that number, that the portion of water which escapes must necessarily carry off a quantity of heat from the adjoining stratum (the temperature of which *may be* thus reduced below the freezing point.) But it is more likely, that in virtue of some new law of the transmission of heat under the combined conditions of elevated temperature and high pressure, while the water, also, is forced to remain in contact with the red hot generator; the whole water in the boiler may be laid under requisition to furnish the discharged fluid with its necessary supply of caloric [heat.]

It is almost unnecessary to state, that the motion of the engine is produced by the difference in elasticity between the steam pressing on one side of the piston and that pressing on the other. In the first case, the steam recently produced acts with a force, say of 500 pounds on the square inch, while that on the weak side, or that communicating with the condenser, acts with only 70; the difference 430 lbs. being the true power gained.

When there is a surplus of water in the generator, occasioned either by working the forcing pump too violently, or by too vehement a heat, the water will escape by the tube *m* with a valve above, loaded with 37 atmospheres, and will pass by the pipe 5, 5, 5, into the condenser S T X U.

In order to explain the ingenious manner in which the pipe 4, 4, 4, supplies the generator with water, we must observe that this pipe com municates with the pump L, which is wrought by the engine.

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* *The parallel motion represented at P Q, is not the correct one used by Mr. Perkins. The piston rod is connected by a flexible joint, with a sort of carriage with four wheels at each end and working in a strong horizontal box of steel.*

This pump draws the water by the pipe 6, 6, 6, from the condenser S T X U, and returns it by the pipe 4, 4, 4; that is to say, when the handle M is drawn up, the water rushes into the cylinder of the forcing pump, through a valve in the pipe 6, 6, 6, opening *into* that cylinder. This valve, of course, instantly closes when the downward stroke of the pump is made; and the water now escapes through a valve opening *outwards*, along 4, 4, 4, thus effectually cutting off all direct or uninterrupted communication between the generator and condenser. In order to keep the water in the condenser at a pressure of five atmospheres, the blast of the bellows H goes round the condenser S T X U; but, when it is not sufficient for this purpose, cold water is introduced from the reservoir L, by means of the pipe 7, 7, 7, loaded with five atmospheres.

From the high elasticity of the steam employed in this engine, it has been supposed to be very liable to explosion. This, however, is a vulgar error. Since there is no reservoir of steam exposing a large surface to its expansive force, as in the common high pressure engines, the steam being generated only in sufficient quantity to produce each succeeding stroke of the piston, the ordinary source of danger is entirely removed. But in order to take away all apprehensions on that subject, the induction pipe 2, 2, 2, in which the steam is actually generated, is made so strong as to sustain an internal force of 4000 pounds on the square inch, which is eight times more powerful than the actual pressure, viz. 500 pounds on the square inch, with which the engine works.

This enormous superabundance of strength is still further secured by means of the safety pipe, 8, 8, 8, provided with a thin copper "safety bulb," *a b*, which is made so as to burst at a pressure of 1000 pounds on the square inch. In order to satisfy his friends on this very important point, Mr. Perkins has repeatedly urged the power of the steam to such a degree as to burst the copper bulb in their presence. This tube merely rends or is torn asunder like a piece of paper, and occasions no injury either to the spectator, or to the apparatus; so that we have no hesitation in considering this engine, notwithstanding its tremendous energies, as much more safe in its operations than even the common low pressure engines.

The safety tube 8, 8, 8, communicates also with the indication *c d*, having a dial plate *c c*, and an index *e f*, which, by means of a suitable contrivance at v v, indicates the pressure or number of atmospheres with which the engine is working.

The cylinder and piston P P Q, have been separated from the rest of the engine, for the sake of distinctness. Their proper position, however, will be understood by supposing, the two lines 99; 99 to coincide as well as tubes 2 3; 2 3.

This engine which we have now described, is at present performing actual work in Mr. Perkins' manufactory. It is calculated as equal to a ten horse power, though the cylinder is no more than 2 inches in diameter, and 18 inches long, with a stroke of only 12 inches. Although the space occupied by the engine is not more than 6 feet by 8, yet Mr Perkins considers that the apparatus,(with the exception of working cylinder, P F, and piston P Q,) is perfectly sufficient for a thirty horse engine. When the engine performs full work, it consumes only *two* bushels of coal in one day.

FROM ACCUM'S CULINARY CHEMISTRY.

COOKERY IS A BRANCH OF CHEMICAL SCIENCE.

Cookery, or the art of preparing good and wholesome food, and of preserving all sorts of alimentary substances in a state fit for human sustenance, or rendering that agreeable to the taste which is essential to the support of life, and of pleasing the palate without injury to the system, is, strictly speaking, a branch of chemistry; but, important as it is both to our enjoyments and our health, it is also one of the least cultivated branches of that science. The culinary processes of roasting, boiling, baking, stewing, frying, broiling, the art of preserving meats, bacon, and hams; the preparations of sauces, pickles, and other condiments; the conserving of fruits; the care and keeping of vegetables; the making of jellies, jams, and marmalades, are all founded upon the principles of this science, and much waste of the material, as well as labour to the parties might often be spared, were those to whom the performance of such tasks is committed, made acquainted with simple chemical truths which would invariably lead to certain results. And, besides, the same knowledge would enable them to attain a much greater degree of perfection in curing and preserving all kinds of animal and vegetable aliments, and in combining the three grand requisites of taste, nutriment, and salubrity, in whatever manner they may be prepared. And, though this art is at present in rude hands, as all branches of chemistry were originally, there is no reason that it should remain so. A kitchen is, in fact, a chemical laboratory; the boilers, stew-pans, and cradle spit of the cook, correspond to the digestors, the evaporating basins, and the crucibles of the chemist. And numerous as the receipts of cookery are, the general operations (like the general process of chemistry) are but few. In some the object aimed at is, to extract the constituent parts of the food, so as to exhibit them in a separate state, or to combine them with other substances, to produce new compounds which differ widely from those from which they originated. In others, the qualities of the substances are simply altered by the action of fire, to render them more palatable and nutritious.

From the multiplicity of circumstances to be attended to in this art, the whole of which is founded upon the principles of chemistry, we may easily see that it must be a very precarious one; and, there is reason to believe, that among the variety of circumstances which produce diseases, the improper modes of cooking food, are often the primary cause. Will it be believed, that in the cookery books which form the prevailing oracles of the kitchens in this part of the island, there are express injunctions to "*boil greens with halfpence, or verdigrise*, in order to improve their *colour*!"* That our puddings are frequently seasoned with laurel leaves, and our sweatmeats almost uniformly prepared in copper vessels?† Why are we thus compelled to swallow a supererogatory quantity of poison which may so easily be avoided? And why are we constantly made to run the risk of our lives by participating in custards, trifles, and blanc manges, seasoned by a most deadly poison extracted from the *prunus lourocerasus*?‡ Verily, where such detestable systems of cookery are practised, we may exclaim with the sacred historian, that there is "Death in the Pot."

Food badly cooked is wasted to no purpose. It seems to have been a complaint familiar in the mouth of our ancestors, and which we may have too often seen reason to re-echo in the present day—"*That God sends good meat, but the devil sends cooks.*"

Observations on the Food of Man.

No animal eats such variety of food as man; he claims, more justly than any other creature, the title of *omnivorous!* for since he is distinguished beyond all animals, by the capability of living in the most distant parts of the globe, under every variety of climate which the earth affords, his food could not be confined exclusively to either the vegetable or animal kingdom, because he inhabits regions that afford aliments widely different from each other. Cattle content themselves with green vegetables; rapacious animals live on flesh of the other creatures.

Those of the Linnæan order, *glires*,* live on grain and fruits; each order of birds, keeps, in the same manner, to one sort of food, animal or vegetable. Fishes, reptiles, and insects, also have each their peculiar and exclusive bill of fare, beyond which even hunger will scarcely force them to wander. But however various each class, and order, and species of animated nature may be in the choice of food, man—all devouring man, will embrace the whole range of the creation, "scarce a berry or a mushroom can escape him."

With the lion and the wolf he will eat of fresh slain animals? with the dogs and the vulture he will feed on putrid flesh;† with the ox and the guinea-pig he will devour raw vegetables, under the name of salads; with the squirrel and the mouse he will feast on nuts and grain; with birds of prey he feeds on fowl of almost every species; with fishes he feeds on fish; and with insects and reptiles he sometimes lives on insects and reptiles. Nor is he satisfied even with this abundant variety, but must go to the mineral kingdom for salt, as a condiment before he can furnish out his meal.

Nations living wholly upon vegetable food.

The variety of alimentary substances used not only by individuals, but among whole nations, are prodigiously diversified, and climate seems to have some effect in producing the diversity of taste, though it must in a great measure depend upon the natural productions of particular countries, their religion, and their commercial intercourse.

A vegetable diet seems suitable to the hot countries under the Equator, and we accordingly find nations there, who have completely adopted it, and who abstain so much the more from all animal food, inas much as it is an article of their religious faith.

Potatoes, chesnuts, and the leguminous and cereal seeds, satisfy the want of the Alpine peasant, and numerous tribes solely feed on vegetables and water. In the most remote antiquity, we read of whole nations in Africa, and of the Indian priests, who lived entirely on vegetable substances. Some wandering Moors subsist almost entirely on gum senegal.

Nations living wholly on animal food.

The nations which live on animal food are very numerous.

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* *The Ladies Library, vol. ii. p. 203; and also Modern Cookery, 2d Edition, p. 94.*

† *Literary Chronicle, No. xxii. p.* 348, 1819.

‡ *Philosophical Magazine, No. cclviii. vol.* 54, *p.* 31.

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* *The hare, rabit, guinea pig, &c.*

† *Every person knows in what a putrid state game is often eaten.*

The Ethiopians, Scythians, and Arabians, eat nothing but flesh.

The miserable inhabitants of New Holland lived wholly on fish when that country was first discovered, and other tribes on the Arabian and Persian gulph.

In the Faro islands, in Iceland and Greenland, the food arises from the same source.

The shepherds in the province of Caracas, or the Oronoko, live wholly on flesh. The Tartars in Asia, and some savage nations in North America, live on raw and half putrid flesh, and some barbarous tribes eat their meat raw.

It appears to be the effect of climate and religion that makes the Hindoo adopt vegetable rather than animal food; it is the effect of natural production that makes the Greenlander relish whale-blubber and train-oil. It is to one or other of these causes that we must refer all such diversity of national tastes, though it would be difficult in many cases to separate the influence of each. We see the Englishman enjoying his under-done roast beef and his plum-pudding; the Scotsman his hodge-podge and his haggis; the Frenchman his ragouts, omlets, and fricandeaus; the German his sour-crout, sausages, and smoaked hams; the Italian his maccaroni; and the Tartar his horse-flesh.* "*De gustibus non est disputandum.*" There is no disputing about tastes. They are too many, and too various, to be objects of rational discussion.

Singular kind of Aliments of various Nations

Besides the before-mentioned diversities of national and individual taste for different kinds of substances, used as aliments, there are other kinds of food which we at least think more singular. Some of the tribes of Arabs, Moors, the Californians, and Ethiopians, eat tad-poles, locusts, and spiders.

In some places the flesh of serpents, that of the *coluber natrix* for example, is eaten; and the viper is made into broth. Several other reptiles are used as food by the European settlers in America, such as the *rana bombina* and *ranta taurina*, two species of toads.

In the East, the *lacerta cincus* is considered a great luxury, and also an approdisiac. Even the rattle-snake has been eaten, and the head boiled along with the rest of the body of the animal.

The horse, ass, and camel, are eaten in several regions of the earth, and the seal, walruss, and Arctic bear, have often yielded a supply to sailors.

On the singular taste of epicures it is not necessary to speak. Mæcenas, the prime minister of Augustus, and refined patron of Horace, had young asses served upon his table when he treated his friends; and according to Pliny,* the Romans delighted in the flavour of young and well fattened puppies. This strange practice subsists still in China, and among the Esquimaux. Plump, and well roasted bats, laid upon a bed of olives, are eaten in the Levant as a dainty.

The Roman luxury, *garum*, which bore so high a price, consisted of the putrid entrails of fishes, (first of the *garum,*) stewed in wine, and a similar dish is still considered as a great luxury, in some parts of the East. Some modern epicures delight in the trail of the woodcock, and even collect with care the contents of the intestines which distill from it in the process of roasting.

"*The Irishman* loves usquebah,
The Scot loves ale called blue cap,
The Welchman, he loves toasted cheese,
And makes his mouth like a mouse trap."

Apicius,* among other whimsical personages of ancient Rome, presented to his guests ragouts, exclusively composed of tongues of peacocks and nightingales. This celebrated epicure, who instituted a gormandizing academy at Rome, having heard that shrimps and prawns of a superior flavour were to be met with on the coasts of Africa than on the Italian shore, freighted a ship, and sailed in search of these far famed marine insects. This person spent more than £60,000 merely to vary the taste of culinary sauces.

Vitellus was treated by his brother with a dinner, consisting of 2,000 dishes of fish, and 7,000 of poultry—surely this is not doing things by halves.

A Mr. Verditch de Bourbonne† is said to have bought 3,000 carps for the mere sake of their tongues, which were brought, well seasoned and *learnedly* dressed, to his table, in one dish.

Difference between an Epicure and a Glutton.

However extravagant and whimsical the rational pleasures of the table may appear to a *sober* and sensible mind, we must, in justice to epicures, cursorily observe, that there exists a material difference between a *gormand*, or epicure, and a *glutton.*‡ The first seeks for peculiar delicacy and distinct flavour in the various dishes presented to the judgment and enjoyment of his discerning palate; while the other lays aside nearly all that relates to the rational pleasures of creating or stimulating an appetite of the cates, and looks merely to a quantity; this, has his stomach in view, and tries how heavy it may be laden, without endangering his health.

"The *gormand* never loses sight of the exquisite organs of taste, so admirably disposed by Providence in the crimson chamber, where sits the discriminating judge, the human tongue.

"The *glutton* is anathematised in the Scripture with those brutes *quorum deus venter est.* The other appears guilty of no other sin than of too great, and two minute, an attention to refinement in commercial sensuality."

Our neighbours on the other side of the channel, so famous for indulging in the worship of Comus, consider the epicure again under two distinct views, namely: as a *gormand*, or a *gourmet.* The epicure or *gormand* is defined—a man having accidentally been able to study the differferent tastes of eatables, does accordingly select the best food and the most pleasing to his palate. His character is that of a *practitioner.* The *gourmet* speculates more than he practises, and eminently prides himself in discerning the nicest degrees, and most evanescent shades of goodness and perfection in the different subjects proposed to him. He may be designated a man, who, by shipping a few drops out of the silver cup of the vintner, can instantly tell from what country the wine comes, and its age.

The *glutton* practices without any regard to theory.

The *gormand*, or epicure, unites theory with practice.

The *gourmet* is merely theoretical.

(To be continued.)

From Memoirs of the Board of Agriculture of the State of New York.

ON THE MANAGEMENT OF BEES, &c.

[By Seth Couch, *of Ulster.*]

Mr. Jesse Buel,

Dear Sir,—Having observed, some time last summer, an advertisement or request from you, or some other member of the Albany County Agricultural Society, for agricultural information, I have thought proper to give you my views and experience, on a subject which, however, may be considered by some as not belonging to agriculture, yet if you think proper, you can give it a place in your next annual agricultural report.

It is on the manner and mode of raising bees, and getting the honey without destroying them, which is as follows:

I make my hives of inch boards, nearly of one size, say 12 to 14 inches square, and 15 inches high, and put four sticks crosswise through each hive, to prevent the comb from falling; in these I put my swarms, and when they have nearly filled that hive, I raise it up, and place another of the same size under it, without any lid, so that the bees may continue the comb through both hives, which an early swarm will often do the first season. These I let stand, until they have done swarming the next year, say about the 20th of July, when the young ones will be principally hatched. I then prepare another hive of the same size, without any lid, which I place on a cloth, spread on two small sticks, laid on the ground near the hive, so that it will be a little bagging below to hold the bees; this I tie tight round the hive with a string. I then take the two hives together, which contain the bees, and set them gently over the empty hive, so that the bees may go down in the lower hive, at the same time tying a cloth round where the hives meet, to prevent the bees from coming out, (if any place should be left large enough.) I then bore two or three large gimblet holes in the lid of the top hive, and blow in a little tobacco smoke, say two or three pipes full, which drives the bees down in the lower hive in fifteen or twenty minutes. I then take a long knife, and run it in between the first and second hives, and cut the comb all off as square as I can between them. I then loosen the top hive, and set it in a tub, and spread a cloth over it, to prevent the bees from coming out, and carry it in the cellar. At the same time I put a new lid on the other hive, and either nail it gently on, or put some weight on to steady it; the cloth may then be loosened, when the bees will return into the hive. I then set the two hives in the old place, or set them there before I loose the cloths, as may be most convenient. All this should be done in the evening, as soon as the bees have done coming in. The next morning, I leave my outside cellar door open, when the bees which remain in the hive which I carry in the cellar gradually leave it, and go to the old place. If they do not leave it soon, if they come out of the hive, I brush them off with a quill; if they do not come out, I blow tobacco smoke in as before, and continue blowing in smoke and brushing at intervals, until they do leave it. I generally hang the hive up by the lid, so as to get them out the better; by these means I always get the best of the honey, as the tops of the hives are filled in the early part of the season, and are the best. I also preserve all my bees by leaving them a sufficient quantity of honey to winter on. Most persons, unacquainted with this mode, would suppose it dangerous, on account of getting stung, but this is seldom the case with me; after I get them in the cellar, they appear to be inoffensive; if I get stung, I apply a little laudanum or camphor, to prevent it from swelling. If my swarms are late, I wait until the next year, after they have done swarming, before I double them, and always have them double one year before I take them off. I have kept bees a number of years, and have always got my honey in this way, and have never killed a swarm yet. I last year took about five hundred pounds of honey in this way, and the present year have taken about eight hundred pounds. I think they swarm nearly as much in this way as in the ordinary way, and make nearly double the quantity of honey, as the swarms are larger out of large hives than out of small ones. I wintered over seventeen hives last winter, and got eighteen swarms from them, most of which I have set other hives under, which are nearly full, and all of them have more honey than they will want to winter on. I had two large hives, which were very full of bees that did not swarm; them I took in the evening, towards the last of June, and turned them bottom up, and set a new hive over, and gently knocked on the under hive, when the bees separated, and part went in the new hive and part staid in the old one, and after about five minutes I took the new hive and sat it in the place of the old one, and put the old one a little distance off, and in this way they both did well, and the bees in the new hives, have both filled them, thus making me twenty swarms, which are all likely to winter well. I think I have now rising two thousand pounds of honey in my hives on the benches, and if nothing extraordinary happens, I think I may safely calculate on getting twelve or fourteen hundred pounds from them next season, and leave them enough to winter on the next winter.

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* *An article of food which has lately been seriously recommended by Mr. Grey to Europeans as a most advantageous measure of political economy.*

* 2 *Book* 29, c. 4.

* *Three brothers of that name were celebrated at Rome, on account of their unparalleled love of good eating.*

† *Cours Gastronomque.*

‡ Tabella Cibaria, *a latin poem, relating to the pleasures of Gastronomy, and the mysterious art of Cooking, page* 15.

The above method is from self-taught experience, as I have never seen it practised, except where I have given the information.

Kingston, October 25, 1822.

EXTRACTS FROM LATE NUMBERS OF THE

London Farmer's Journal.

IN ANSWER TO MR. SMYTHIES.

Acton, Beauchamp, July 1, 1823.

SIR,

The same person who conveyed my letter of this day's date, addressed to you, to the post-office, brought me your Journal containing Mr. Smythies, challenge.* I am not enabled at the present moment to state positively that it will be accepted, but believing Mr. Smythies to be serious in his proposal, I am desirous to point out to him where it ought to be amended.

In the first place, your correspondent has made his own peculiar selection, no doubt well considered, for his own particular avowed purpose, viz. "to establish the superiority of the Hereford breed of cattle." Now, it is more than probable that at *this season* no Short-horned breeder can come forward to accede to his proposal, because the well bred Short-horned bulls, such as he would wish to encounter, drive a thrifty and not idle trade, whilst his two Herefords may probably have been pampered at home. On this circumstance I ground one objection to Mr. Smythies' proposal. But I have yet others to state. The animals are to be confined (I wish them no worse) to the mother's milk. But Mr. Smythies, I dare say, is ignorant that *generally* it would be dangerous to give a Short-horned calf the whole of its mother's milk, although the plan may be very safely pursued with Herefords. I say generally, because there are exceptions in all breeds. But a Short-horned cow generally giving much more milk than her calf can take, and her owner having *every* purpose of utility in view, a different system is adopted with them to that which Hereford breeders use: Short-horned calves are chiefly brought up *by hand*, or by a cow which, having calved long, gives little milk. How then can calves so reared be rendered fit by subsequent management to be accounted qualified for competition, according to the tenor of Mr. Smythies' proposals?

Other objections present themselves, but I shall mention only one, which is very material to the success of the negociation—namely, that not Tredegar (which is far out of the way,) but a convenient central situation be chosen, at which, if possible, by a drift of fifty or sixty miles, both parties may be equally accommodated. Indeed I consider this to be essential to the character of a serious proposal.

What has been above advanced will, I am convinced, be deemed sufficient to call on Mr. Smythies for amended proposals. I will venture to assure him the breeders of Short-horns desire nothing so much as a meeting on fair terms, and will beg leave to suggest, that as he proposes in the proposed meeting to establish *the* superiority of Herefords, a similar advantage ought to be assured the Short-horns in case they prove fortunate; and that the Hereford breeders be called on to declare that in the fate of Mr Smythies' stock, they are willing to involve that of their own. This seems only reasonable, as the trial must be attended with considerable expense and risk, and ought to be productive of gratification to the fortunate party.

I am, sir,
your ob't serv't,
HENRY BERRY.

DEAD MARKETS.

We have noticed some of the prize carcasses, and others of extra quality, in Leadenhall and elsewhere, during the last week. The heaviest sheep we have heard of are Mr. Turner's, of Exmouth, (not in the Smithfield shew,) one of which weighed twenty-eight stone two pounds,* and the others twenty-five stone each; besides their weight, they were of very excellent frame, and very fat within. One of Mr. Rowland's sheep we saw, which weighed twenty-two and á half stone. Mr. Ellman's prize Southdowns weighed fourteen stones together, they were good sheep dead. An exceedingly fat Scot, of Lord Harborough's; hung up in Leadenhall-market—it was *small in size and great in value*, weighing thirty stone per quarter.—one of the sheep shewed by Mr. Guerrier, in Sadler's Yard, weighing eighteen stone had the extraordinary proof of five stone one pound, namely, the caul thirty-two pounds, and loose fat nine pounds, thirty two months old, never had corn or pulse; bred by Mr. Wm. Haver, of Northleach. We saw also the prize sheep of Mr. Plaskett, but did not learn the weight.—To add to our Christmas bill of fare, the house-lamb was, as usual, excellent; but the price, for the best, is down £2 a piece since last year; the largest weigh seventeen pounds a quarter, and are now sold for £4 a piece.—A prize turkey weighed twenty-five and a half pounds; and Mrs. Wood's fat rabbits *(dressed* by John Smith, house-lamb butcher, of Leadenhall,) weighed eleven pounds each.

Dr. Wolcot, better known by the name of Peter Pindar, from the prodigious sale of his early pieces, became a desirable object of bookselling speculation; and about the year 1795, Robinson, Golding, and Walker, entered into a treaty to grant him an annuity for his published works, and on certain conditions for his unpublished ones. While this was pending, Peter had an attack of asthma, which he did not conceal or palliate, but at meetings of the parties his asthma always interrupted the business. A fatal result was of course anticipated, and, instead of a sum of money, an annuity of £250 per annum was preferred. Soon after the bond was signed, Peter called on Walker, the manager for the parties, who, surveying him with a scrutinizing eye, asked him how he did? "Much better, thank you," said Peter: "I have taken measure of my asthma; the fellow is troublesome, but I know his strength, and am his master." "Oh!" said Mr. Walker, gravely, and turned into an adjoining room, where Mrs. Walker, a prudent woman, had been listening to the conversation. Peter, aware of the feeling, paid a keen attention to the husband and wife, and heard the latter exclaim, "There now, didn't I tell you he won'n't die? fool that you've been; I knew he wou'nt die." Peter enjoyed the joke, and outlived all the parties, receiving the annuity for twenty-four years, during which various efforts were improperly used to frustrate his claims.

THE DEAD.—David Morrison has been sentenced to seven years' banishment by the Scotch High Court of Justiciary, for violating the sepulchres of the dead. On his trial, Dr. Barclay, a teacher of anatomy, deposed, that some bodies became decomposed in a few days, others lasted much longer; in some the features could not be known in forty-eight hours, while in others they might be recognised for a week; but much depended on the previous illness: the longest he ever knew was the features of a Lascar, which remained recognizable for a fortnight. In three weeks a subject would be unfit for the purposes of dissection. In two weeks the outer skin comes off, with it the nails, and the hair would be loose, but marks on the body might be identified. He had known frequent cases where relatives were mistaken in the bodies they claimed, and instanced one where a body made of leather was insisted on as being the one they were in search of. Dissectors are obliged, in order to distinguish one subject from another, to affix marks.

Fonthill Abbey was again opened for view on Monday. So powerful are the impressions of last year, that visitors presented themselves at the gate before the regular time of admission, and during the day a greater number entered than during the first month of the last view. The variety and splendour of the additional rooms now thrown open is astonishing. The whole gallery of pictures is arranged and displayed in the most judicious manner, and every volume of the extraordinary library may be examined. The American garden is in flower. All description must fail to give an accurate idea of this Transatlantic scene, where rhododendrons, magnolias, and other exotics, cover a surface of several acres.

Latterly the English have endeavoured, by peculiar management, to make the English Cranberry grow in dry beds; and probably they will succeed in their attempts. Should this happen, without much trouble, it will be easy to copy their practice in our gardens in the United States.

Rice Sponge Cake.—Nine eggs, the weight of them in sugar, the weight of six in rice flour, have the sugar finely sifted, mix the sugar and rice together, have the whites and yolks beat separately, pour the eggs all at the same time into the rice and sugar, beat them together about a quarter of an hour, add of the essence of lemon twenty drops, or rose water.

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* As published in our last.

* 226 pounds.

Editorial Correspondence.

Springdale, August 28th, 1823.

DEAR SIR,

Within the last few weeks much has been said on the subject of wheat degenerating into cheat, and many doubts expressed whether cheat would re-produce its kind, and, indeed. whether it possessed at all, vegetative powers. The degeneracy of wheat is involved in so much mystery that it would be imprudent in a young farmer to suffer himself to form, without satisfactory experiment, an opinion on the subject. After a few months, I hope I shall, without diffidence, be willing to express an opinion, whether opposed to the most learned philosophers, or the best practical farmer. As to the fact of cheat producing cheat, I have never entertained a doubt. To convince others, however, I, a few weeks since, obtained some clean seed, and put it in a drinking glass filled with cotton, kept moist by daily adding water to it; in about ten days it sprouted, and I now have it growing six inches high on my mantlepiece.

Your's respectfully,
WILLIAM M. BARTON.

Extract from Columbia, S. C. August 22, 1823.

"I have nothing particular to mention. My Egyptian millet grows very handsomely, and I have lately, for the first time, made some wine from the vines I cultivate in our sand hills. I made about sixty gallons of it; but it appears to me that it will prove a very weak wine. The causes of this, however, are evident. The vines are very young, and the season has been very rainy."

"J. S. SKINNER, ESQ."

Extract of a letter from a correspondent, dated
MILLEDGVILLE, (Geo.) 14th July.

"I have prevailed on a number of merchants to make enquiries of the farmers, and take memorandums of the quantity of ground planted in cotton the present and last year, and so far as our enquiries have gone, the present crop is one fourth less than the last was, and the last was a favourable season:—It is believed there will be at least that difference, (if no more) in the crop."

Kingston, Tennessee, 28th August, 1823.

MR. J. S. SKINNER,

Sir—In your paper of the 15th, I notice some remarks on the subject of the botts in the stomach of horses: my means of cure, when I have a horse attacked with botts, is to kill a chicken immediately, pull out its entrails as quick as possible, and put them down the throat of the horse—this done in a short time after attacked, I never knew to fail. I find my oxen, when well fed, will travel with a loaded wagon from fifteen to eighteen miles per day, in the hottest days of summer.

SAMUEL MARTIN.

Hillsborough, N. Carolina.

JOHN S. SKINNER, ESQ.

Dear Sir—Accept my thanks for the 175 grains of wheat received by the last mail. They shall be soon carefully and well attended to. The ice-rind melon seed was planted and produced well: the melon is delicious, though not a rarity among us; there being many this season for sale in our market.

The Senna was also planted, and grew well for a short time, but was accidentally destroyed.

The Egyptian millet received by you from Columbia, South Carolina, grows luxuriantly, and looks well.

The small green pea did not vegetate.

I have raised two excellent musk-melons from a seed of the quantity you received from Charleston. The flavour is exquisite.

I remain, dear sir,
Your's respectfully,
JOHN SCOTT.

EXPERIMENTS IN CHEMISTRY.

Preservation of Eggs from putrefaction.

To transport eggs in a fresh state from one country to another, varnish, by dipping them in a solution of Gum Arabic in water; and then imbed them in powdered charcoal. The Gum Arabic answers the purpose of a varnish for eggs much better than any resinous gum, as it can be easily removed by washing in either warm or cold water; besides, it is much cheaper. Eggs preserved in this manner, will keep for many years, as the bed of Charcoal, from its porous nature, is a non-conductor of heat, and consequently maintains around the eggs an uniform temperature; preventing them from suffering by alternations of heat and cold, when they are removed from one climate to another.

Observation. This method is infinitely preferable to that of greasing them, for when the grease becomes rancid, it hastens or promotes putrefaction of the animal matter in the egg.

Preservation of Grapes.

In a cask or barrel, having its crevices well closed to prevent access of the external air, place a layer of bran, which has been well dried in an oven; upon this place a layer of bunches of Grapes, well cleaned, and gathered in the afternoon of a dry day, before they are perfectly ripe; proceed then with alternate layers of bran and Grapes till the barrel is full, taking care that the Grapes do not touch each other, and to let the last layer be of bran; then close the barrel so that the air may not be able to penetrate. Grapes thus packed will keep for a twelvemonth. To restore their freshness, cut the end of each bunch and put that of white Grapes into white wine, and that of black Grapes into red wine, as flowers are put into water to keep them fresh.

Observations. It is customary in France to pack grapes for the London markets in *saw-dust.* If the precaution of drying the saw-dust by a gentle heat, before use, be had recourse to, this expedient may answer very well; but if this is not done, and if the wood has been cut fresh, the turpentine, and other odours of the wood cannot fail to injure the fruit. Oak saw dust will answer best.

Varnish for boots and shoes, by which they are rendered impervious to water.

The following method of effecting this useful purpose is related in Sir John Hawkins's edition of Isaac Walton's complete Angler:—Take a pint of Linseed Oil, with half a pound of Mutton Suet, six or eight ounces of Bees' Wax, and a small piece of Rosin. Boil all this in a pipkin together; and let it cool till it be milk-warm.—Then with a hair brush, lay it on new boots or shoes; but it is best that this Varnish be laid on the Leather, before the boots are made. The boots should also be brushed over with it, after they come from the maker. If old boots or shoes are to be varnished, the mixture is to be laid on, when the Leather is perfectly *dry.*

Method of Cleaning Silks, Woollens, and Cottons, without Damage to their Texture and Colour.

Grate raw Potatoes to a fine pulp in clean water, and pass the liquid matter, through a coarse sieve, into another vessel of Water; let the mixture stand still till the fine white particles of the Potatoes are precipitated; then pour the mucilaginous liquor from the fecula, and preserve the liquor for use. The article to be cleaned should then be laid upon a linen cloth on a table, and having provided a clean sponge, dip it into the Potato liquor and apply it to the article to be cleaned, till the dirt is perfectly separated; then wash it in clean Water several times. Two middle sized Potatoes will be sufficient for a pint of Water.

Observations. The coarse pulp, which does not pass through the sieve, is of great use in cleaning worsted curtains, tapestry, carpets, and other coarse goods. The mucilaginous liquor will clean all sorts of silk, cotton, or woollen goods, without hurting or spoiling the colour; it may be also used in cleaning oil paintings, or furniture that is soiled. Dirtied painted wainscots may be cleaned by wetting a sponge in the liquor; then dipping it in a little fine clean sand, and afterwards rubbing the wainscot with it.

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER 19, 1823.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7—Howard street, from wagons, $6 75—Superfine, $6 50—fine do. $6 25—Wharf, do. $6 00—White wheat, $1 20 to 1 30—Red do. $1 15 to $1 20—Rye. 40 to 45 cts—Corn, 38 a 40 cts.—wharf Oats, 26 a 30 cts.—wagon Oats, 31 cents—Beef, 8 cents per lb.—Live Cattle, $6 to $6 50, per cwt.— Bacon, hog round, $10—Pork, $4 50 to 5 50 per c. lb., 6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, retail, $1 50, cargo price, 1 12½—Peas, retail, 75 a 80 cts., cargo price 58 a 60 cts. —Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 30 cts. per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl., No. 2, $2 37½—Fine Salt, 60 to 65 cts. per bush., coarse, do. 70—Butter, (firkin) 14 cts. per lb.—Eggs, 12½ cts. per doz.—New Hay, $15 per ton, old do $18—Straw, $9.

MARYLAND TOBACCO.—No sales.

A NEW ARTICLE FOR
HOUSEKEEPERS.

The subscribers have just received from the manufactory, an additional supply of the much approved portable cooking and *preserving FURNACES*—Price $1 to $2.

These furnaces, to those unacquainted with the use of them, are best suited for charcoal or other light condensed fuel, and afford a great heat, at a small expense; besides saving the body from unnecessary exposure to heat.

Their uses are various—preserving, baking cakes, stewing oysters, &c. Broiling steaks, (for which they are peculiarly well adapted) boiling and culinary purposes generally, for heating smoothing irons, &c.

We have also received CHYMICAL FURNACES.

GEORGE GRUNDY & SONS,
No. 8, N. Charles-street,
Who are duly authorised by the manufacturers, as their agents to sell the same.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

HORTICULTURAL.

Brief notice of the Horticultural Society of London—and its President, T. A. Knight, Esq.

In number 24, page 192 of this volume, we adverted to the arrival of Mr. Douglas in New York, as a botanical missionary from the horticultural society of London—we are gratified to learn that he was kindly received and, entertained by Doctor Hosack and other members of the horticultural society of New York, and that after an interview with Governor Clinton, to whom he was especially instructed to address himself,—he has proceeded through the western parts of New York, to Amhertsbury in Canada, intending to return by the same route to re-embark sometime in Autumn for England.

We take this occasion to repeat that we shall esteem it a favour to be made the medium of adding to Mr. Douglas' collection of native American plants, grasses, vines, flowers, &c.

The following sketch of the distinguished institution of which we are speaking, is from a New York paper, and presumed to be from the pen of a scholar whose various useful and elegant acquirements have made him known to all countries, and an ornament to his own

Editor American Farmer.

Horticultural Society of London.—Among the many laudable and magnificent institutions in Great Britain, the Horticultural Society of London is entitled to distinguished rank. It is countenanced by the first men in the kingdom, and is a noble confederacy of science and practice, to elevate horticulture above the state of an empiric art. This institution is principally under the direction of Thomas Andrew Knight, and Joseph Sabine, Esquires. The former is its President, and is particularly distinguished as a writer on vegetable physiology; the latter is its Secretary, and is celebrated for his scientific acquirements.

The horticultural society was instituted in 1804 and incorporated in 1808. In 1822 a subscription of £5000 sterling was raised for the formation of a garden on an extensive scale, and thirty-three acres were procured on a lease for that purpose, at Chiswick, five miles from Hyde Park Corner, London. The lease is for sixty years, renewable every thirty years, forever, upon a fine certain, and at a rental of £300 per annum, with power to the society of relinquishing its obligations at any time on giving twelve months notice. These grounds are very judiciously laid out into an orchard; a kitchen garden with thirty six compartments; stock ground for a succession of fruit trees; places for stoves, green-houses and forcing-houses; a flower garden; an arboretum for ornamental trees and shrubs, and hardy perennial plants; a fruit and kitchen garden for experimental purposes; and also an ornamental garden for the like purposes.

The orchard contains already 3000 standard trees of the best fruit. The flower garden has 1200 varieties of roses; the most splendid assemblage of the kind in Europe.

Fruit and esculent vegetables are principally cultivated Vegetables of a different description are not attended to, unless of an ornamental or useful character In one year, 435 samples of lettuces, 261 of peas, and 240 of potatoes were produced and examined.

The society is indefatigable in its exertions and munificent in its expenditures, in order to augment its collections and to extend the benefits of horticulture. An agent has been sent to China and Hindostan for that purpose: Another has been employed on the west coast of Africa, in South America, and the West Indies, and a third has explored the eastern coast of Africa, Lisbon, Madeira, Brazil, and the Cape of Good Hope. The vegetable treasures of the United States have been put in requisition, and besides resident agents, Mr. David Douglas is specially employed to collect plants, seeds, and specimens for the society. He has recently arrived in New York, and will proceed on his mission through this state to Upper Canada. He is intelligent and well informed, and it is hoped that every liberal and enlightened man will promote a mission so important to the best interests of mankind.

The institution is composed of Fellows, Practical Gardeners admitted to the privilege of Fellows, Honorary members, Foreign members, Corresponding members at home, and Corresponding members abroad. There are three foreign members in the United States and several corresponding members. Each Fellow pays an initiation fee of six guineas, and an annual contribution of four guineas. One guinea of the admission fee and one of the annual fee are appropriated to the ordinary support of the garden.—The residue is applied to the increase of its collections and to its other expenses. The number of Fellows is about 1500, and as all spare productions are sold, the income of the institution is adequate to the most munificent exertions.

The superintendence of the establishment is conducted by the President and Secretary, under the direction of a committee of four, composed of those officers, the Treasurer and Vice-Secretary. The Society have an anniversary dinner and general meeting, where there is a splendid exhibition of choice and curious fruits, flowers, and esculent vegetables.

In this establishment, experiments of every nature are instituted with a view to verify former results, or to try new practices, and it forms an excellent school for gardeners. The under gardeners and laborers become in time perfectly well acquainted with Horticulture and qualified as principals in the care of other establishments.

The Society published in 1805, a quarto volume of its transactions; since which four additional volumes have appeared, replete with the most useful information and adorned with the most elegant and beautiful delineation of fruits and flowers that have ever appeared.

As a further inducement if any be wanting to aid Mr. Douglas in his laudable enterprise, we would refer the reader to the last volume of the memoirs of the Agricultural Society of Massachusetts, page 331, for "Some notice of Thomas Andrew Knight, Esq. President of the Horticultural Society of London, his experiments and present to this society," written by the Hon. John Lowell, then corresponding secretary, and now President of that most respectable and efficient association.—We would gladly copy all that Mr. Lowell has so well and so justly said of the useful and scientific labours of Mr. Knight, if we had room for the whole article; but we are forced to confine ourselves at present to so much of it, as more particularly evinces his kindness to our country and the obligation that exists on the ground of sheer gratitude to reciprocate his attentions, by sending to that society, the seeds of such indigenous plants, vegetables, vines, flowers &c. as it may be imagined, would be new to them, and useful either for culinary purposes, for dyeing, for ornament, for medicine, &c.—*Edit. Am. Far.*

But these are but a part of Mr. Knight's labors and services. Following up the Linnæan theory of the sexual system of plants, (or to speak in language better adapted to all classes of readers.) proceeding upon the well established fact, that certain parts of the flower, called Anthers, produce a dust called Pollen, which is indispensable to the fertilization of the germ or fruit, a fact known to be true, before Linnæas existed, but which never received perfect confidence, till he demonstrated it. Mr. Knight has devoted thirty-five years of his life to the practical application of his theory, which he has not only demonstrated by hundreds of experiments, but he may be said to have created many new and valuable varieties of fruits hitherto unknown. He has obtained new varieties of the pear, the apple, the grape, the plum, and the strawberry. He has demonstrated that we can correct the defects of one variety of fruit by another, by introducing the farina of a pear for example, which has too much austerity or acidity into the flower of another pear, which has too much sweetness, too insipid a sweet, you may give to the new product a taste and flavour, which may be perfectly agreeable. So it has been ascertained by Mr. Knight, that by the same process, a fruit which is defective in vigour, which bears with great reluctance a cold climate, may, by intermixing it, or coupling it with another tree of the same species of a hardy character, acquire the vigorous constitution of one of its parents, and still retain the excellent qualities of the other parent. There is, indeed, no end to the changes which have been produced by Mr. Knight and others, not in fruits, but in flowers, by this process. We are aware that this statement, to those who are ignorant of his exertions and success, may seem to be extravagant; but we can affirm, that he has done more to improve horticulture than any person of whom we, in this western world, have any knowledge.

These remarks were intended as an introduction to a notice of the efforts which Mr. Knight has generously made to communicate to America some of his improved fruits. In 1822, I had occasion to write to Mr. Knight to procure the last numbers of the Horticultural Transactions, for the college; he replied to my letter in the most friendly manner, appeared to be highly gratified with opening an intercourse with our country, expressed his strong attachment to it, his disgust at the libels on our country in some of the presses of Great Britain, and his intention to send to us the best new fruits which the late improvements had introduced; declaring at the same time, that though he should confide them to my care, it was under the full belief and expectation that I should disseminate them as extensively as possible. I need not say, that he could not have given me a charge more agreeable; and that without the smallest regard to personal interest, I shall circulate as largely as possible, by buds and scions, every variety of fruit he may send. I shall consider myself steward for the public—but I ought to remark, that as he sends but one individual specimen, the progress must be slow, and that I must exercise a discretion in giving scions and buds to such persons as will be most like to take good care of them; but I shall do it in all cases on the express condition, that the same freedom of circulation shall be practised by all.

I shall close this article by inserting Mr. Knight's last letter to me, accompanying certain fruit trees sent this spring.

"*Downton Castle, Feb. 15th* 1823.

"John Lowell, Esq.

"*Dear Sir*,—I have this day sent to Messrs. Thornely, of Liverpool, to be forwarded to you, a box containing trees and grafts of *ten new* varieties of pears, which *here* ripen in succession from October to May, and which I conclude in your warmer summer climate will ripen in succession.

—I could have sent a larger number of varieties. but those sent are the best and the most productive, and inferior varieties that would ripen at the same seasons, I did not think worth sending. Each tree has a label and is also numbered besides, and I will now give you a *concise description* of each variety. I have also sent grafts of each variety from *bearing* trees, that you may certainly have each variety.

No. 1. Cassiomont—a large pear, yellow upon one side and red upon the other, ripens in October.

No. 2. Tillington—This is described in the Horticultural Transactions. It is perfectly melting or rather perfectly beurree, and very rich, sprang from a seed of the autumn bergamot,—and the pollen of the Jargonelle, and its form is precisely such as you would expect from such a mixture. It is ripe in November."

[N. B. by the Corresponding Secretary.]—This example will shew our cultivators the process of Mr. Knight and the great changes produced by it. He removed from the flowers of the autumn Bergamot all the anthers. He impregnated the germ with the pollen of the Jargonelle. He took the seeds of the fruit, thus obtained, sowed them, and produced a *new pear*, having a mixed form, between that of the Jargonelle, which is long and eminently pear shaped—and that of the autumn Bergamot, which is flattened and rather apple shaped—and it ripens nearly two months *later* than either of its parents. Being a new seedling, it will have strength and vigour and endure many years. Mr. Knight computes the longevity of a new variety of pear at more than 150 years. We may then form some judgment of the value of such an acquisition, when we know and have perceived for many years the gradual deterioration of the St. Germain, St. Michaels, Chanmontelle, &c.

" No. 3. Urbaniste—A large and nearly globular pear—color yellowish green—the flavor of rose water. Season, November.

" No. 4. Beurre Knox—Large, pear shaped, yellow. Season, November and December, an excellent pear.

" No. 5. Marie Louise—Middle sized—colour, pale yellow. Season, November and December, a most excellent variety.

" No. 6. Napolean—Somewhat smaller than the Marie Louise, exceedingly melting and juicy. Season, November and December.

" No. 7. Florelle—Middle size and pear shaped, colour bright red, nearly scarlet, with minute dark points, a most beautiful and excellent variety. Season November.

" No. 8. Colmar d' Hyver—shape varying from nearly globular to pear shaped, colour yellowish green. Season, January—a melting pear of first rate excellence and very productive.

" No. 9. Passe Colmar—Large and pear shaped, but very broad towards the eye. An exceedingly fine melting pear, which by being kept in different temperatures, may *here* be brought to table in perfection from the beginning of January to the middle or end of April. This variety is productive to a fault. I am generally obliged to take off 9-10ths of the fruit.

" No. 10. Hardenpont de Printems*—a large pale green pear with rather a rough skin. It ripens *here* (in England) in the end of April or beginning of May—and its flesh at that period nearly resembles that of the Brown Beurré in Autumn. It is a very productive variety, and in *your climate* will, I believe, prove the most valuable variety of all.

" No. 11. Gilliflower apple—*Grafts only sent*—Form angular flesh perfumed and remarkably yellow. It is in perfection in *winter and spring.* It would afford in a warmer climate a most excellent cider.

" No. 12. Sweeney Nonparcil Apple—A very large variety of the Nonpareil, very excellent ripened on a south wall, or in a very warm season, and good situation, but too late for our climate. I believe it would suit yours. It is entirely new.

" No. 13. Black Eagle Cherry.

" No. 14. Elton Cherry.

" No. 15. Waterloo Cherry.

All these cherries are new varieties produced by Mr. Knight—they have been described in the horticultural transactions and colored plates of them given—they have all of them valuable properties.

It should be recollected, that Mr. Knight often fails in his numerous experiments, and it is only the excellent new varieties which he presents to the public.

" No. 16. Downton Cherry—It is a white or pale red cherry with white flesh, and it is believed will prove an excellent variety.

" No. 17. Cooes Golden drop plum—A fine variety from the original stock.

" No. 18. A very large new plum of a green color, which promises well.

Mr. Knight added also two hundred Downton Strawberry plants; a new variety, but they perished in the passage.

The trees were admirably packed, and although they started more than could have been desired on the passage, yet there is no doubt we shall save every variety except perhaps one or two of the cherries—but had they all perished, our feelings towards Mr. Knight would not have been affected. His good intentions—his kindness towards our country, his philanthropy, would not have been the less. Unsolicited, he has bestowed upon us, what is of no small value, independent of the excellent intention. One new, and excellent variety of fruit is a great gain. How much have the St. Germain and St. Michaels Pear contributed to the pleasures of our tables?

Who would not be pleased to have *ten new and excellent varieties* of pears, in the prime of youth, to supply the place of these, which we must soon lose? We trust we shall find some apologists for the zeal with which this article is written. There is something so kind, in this intercommunication between cultivators of different countries; it seems to be such a forgetting of the old circumstances of separation, that one cannot but be pleased with it.

HOPS.

Our readers have observed our anxiety to procure for them, the most authentic and particular information respecting the cultivation and curing of hops in New England, where that subject is best understood. If there be any thing material omitted in the accounts hitherto published,, that omission will be supplied in the following treatise, which we find in the last number of that excellent Journal, the New England Farmer, communicated for that paper by W. Blanchard Jr. Esq. of Wilmington, Massachusetts:—that, we understand to be the town where hops were first cultivated to any considerable extent in that part of our country—as late as the year 92, there were probably more hops grown in that town, than in all the others in New England.

Edit. Am. Far.

FROM THE NEW ENGLAND FARMER.

Thomas G. Fessenden, Esq.

Sir—The cultivation of hops is becoming an important branch of agriculture with our farmers, both as an article for exportation and domestic consumption. The quantity now raised in this country, annually, does not vary much from a million of pounds. Great improvements have been made, within a few years, in the cultivation and management of this article; and with such success, that we have had several lots which would compare (without prejudice to their reputation) with the best English hops. In consequence of which, our hops are gaining a fair reputation abroad; and our home consumption is rapidly increasing:—a prospect highly gratifying to every friend to society, to see the wholesome liquor made from this article introduced, and supplying the place of ardent spirits.

If, Sir, you deem the following observations on the culture and management of hops, worthy a place in your paper, you are at liberty to publish them.

Your's respectfully, &c.
WILLIAM BLANCHARD, Jr.
Wilmington, August 26, 1823.

The hop is a native plant. It is found growing spontaneously on the banks and intervales of many of our large rivers. There are several distinct species, all bearing a near affinity to each other; (I have noticed five.) At present they are cultivated together, promiscuously; no preference having been given to any particular one of them by the brewer. But I am of the opinion that there is an essential difference in their qualities—that one may be the best for pale ale; another for strong beer; and a third for porter; and I presume, ere long, particular attention will be paid to ascertain their different qualities.

The soil best calculated for the production of hops, I consider to be a sandy loam, rather low and moist. I am led to this conclusion, partly from my own observation, and further (considering Nature an infallible instructor,) from finding the lands which produce them naturally (intervales and the banks of large rivers) to be of this kind.. Yet, I must observe, I have seen very fine crops raised on different soils.*

I should recommend the following mode of preparing the land and manuring the crop. In the fall (October) plough the land deep—nine or ten inches. In the spring following pass a heavy sharp iron toothed harrow over the land in the same direction it was ploughed; after which, spread your manure evenly over the same, sixteen chords per acre, and more if the land be much reduced; then cross-plough the land nearly the same depth, and furrow it as for planting corn—the furrows to be at least four feet apart.

It is customary to plant corn or potatoes with the hops, (I should prefer potatoes.) Plant every other hill in every other row with hops, thus placing the hop hills at least eight feet apart. Put four cuttings, from the running roots, about eight inches in length, into each hill, and cover them the common depth of potatoes.

Many yards have been much injured by being planted too closely. It is of great importance to have the hills so far distant from each other as to admit a free current of air to pass through the yard.

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* *So named I have observed from Monsr. Hardenpont of Mons. in Brabant, who raised it as a seedling. It is christened by the French Gardeners Beurré Rance, but the English cultivators give credit to its creator, or raiser.*—Cor. Sec.

* In passing from one to another of the numerous sulphur springs in Virginia, one is there struck with the exceedingly luxuriant growth of the hop vine, in the *narrow* vallies which separate the mountains—and comes at once to the conclusion, that there must be something particularly congenial to their nature in the soil and climate—the former of which is a rich black and rather a sandy or slate loam, and the latter moistened to an extreme degree, by almost perpetual fogs.—*Edit. Am. Far.*

All the attention requisite the first season, after the hops are planted, is to keep them clean from weeds, which is easily done when hoeing the crop planted amongst them. In the fall (October) to prevent their being injured by the hard frosts of winter, carry on, and lay out of your cart, one shovel full of compost manure on the top of each hill;—manure from the hog-stye I should prefer.

In each following spring, before the hops are opened, as it is termed, spread evenly over the yard about eight cords of manure per acre,—(coarse, strawy manure, I should prefer, as it will have a tendency to keep the land loose;) and plough the field both ways at the first hoeing. They require but three hoeings in a season, unless necessary to subdue the weeds; the last of which should be performed when the hops are in full blossom, (about the beginning of August.)

After the first crop, it is necessary to open the hops, every spring, by the middle of May; which is performed by making four furrows between the rows, turning the furrows from the hills, and running the plough as near to the same as possible without injuring the main roots. Then the earth is removed from the roots with a hoe—all the running roots cut in, with a sharp knife, within two inches of the main roots—the tops of the main roots must also be cut in—and then the hills covered with earth about two inches deep.

The next thing necessary to be done, is to set the poles. This should be done as soon as the hop-vines begin to make their appearance. By so doing, much time and labour will be saved in tying up the vines to the poles, as many of the vines will naturally take to the poles.—There should not be to exceed two vines to one poll, nor to exceed two poles to one hill, nor any pole to exceed sixteen feet in height. Many yards have been very much injured by letting a greater number of vines grow on one pole; and almost destroyed by over-polling.

Very much depends on paying due attention in the spring, to select the most thrifty vines, and training them to the poles, which is done by fastening them to the poles with a piece of yarn, slightly twisted together with the thumb and finger.

It will be necessary to inspect your hop-yard frequently, until the hops begin to blossom, and "tie up the vines," as it is termed, as they are subject to be blown off the poles by every high wind.

As soon as the hops are ripe, which is about the beginning of September, they must be immediately gathered, or the crop is lost. The quality of the hops depends considerably on their being picked clean from leaves and stems. The labor of picking or gathering the hops, may be well performed by women and children, having one man to a bin to handle the poles, and to inspect the pickers. The bin is a wonden box, about nine feet long, three feet wide, and two and a half feet high, made of thin pine boards, that it may be easily moved over the yard, across which the poles are laid, and into which the hops are picked by hand. Care should be taken, when gathering the hops, to put the vines two feet from the ground, that the roots may not be injured by bleeding.

The most important part in the management of hops, is the curing or drying of them. Here I would note, that hops always grow first sort; and that all second sort and refuse hops, are made so by unfortunate or unskilful management.

Much depends on having a well constructed kiln. For the convenience of putting the hops on the kiln, the side of an hill is generally chosen for its situation. Care should be taken that it be a dry situation. The kiln should be dug out the same bigness at the bottom as at the top; the side walls laid up perpendicularly, and filled in solid with stone to give it a tunnel form. Twelve feet square at the top, two feet square at the bottom, and at least eight feet deep, is deemed a convenient size. On the top of the wall sills are laid, having joists let into them in like manner as for laying a floor—on which laths, about 1½ inches wide, are nailed, leaving open spaces between them ¾ of an inch, over which a thin linen cloth is spread, and nailed at the edges to the sills. A board about 12 inches wide is set up on each side of the kiln, on the inner edge of the sill, to form a bin to receive the hops. The larger the stones made use of in the construction of the kiln, the better; as it will give a more steady and dense heat. The inside of the kiln, should be well plastered with mortar to make it completely air tight. Charcoal (that made from yellow birch or maple I should prefer,) is the only fuel proper to be used in drying hops. The kiln should be well heated before any hops are put on, and carefully attended to keep a steady and regular heat.

Fifty pounds of hops, when dried, is the largest quantity that should be dried, at one time, on a kiln of this size; and unless absolutely necessary to put on that quantity, a less would dry better. The green hops should be spread as evenly and as light as possible over the kiln. The fire at first should be moderate, but it may be increased as the hops dry and the steam is evaporated.

Hops should not remain long in the bin or bag after they are picked, as they will very soon heat and become insipid. The hops should *not* be stirred on the kiln until they are completely and fully dried. Then they should be removed from the kiln into a dry room and laid in a heap, and there remain unmoved and unstirred, until bagged, which is done with a screw, having a box made of plank the size the bag is wished, into which the cloth is laid, and the hops screwed into the box, which is so constructed that the sides may be removed, and the bag sewed together while in the press.

The hops, after laying a few days, will gather a partial moisture, called a sweat. The sweat will probably begin to subside in about eight days, at which time, and before the sweat is off, they ought to be bagged in clear dry weather. As the exact time when the hops will begin to sweat, and when the sweat will begin to subside or dry off, (the proper time to bag them) will vary with the state of the atmosphere, it will be necessary to examine the hops from day to day, which is easily done by taking some of them from the centre of the heap with your hand. If on examination you find the hops to be very damp, and their color altering,—which will be the case if they were not completely dried on the kiln, and not otherwise—you must overhale them and dry them in the air.

The most convenient size for a bag of hops to handle and transport, is about five feet in length, and to contain about 250 pounds. The best bagging is coarse strong tow cloth of our domestic manufacturing; next to that, Russia hemp bagging. The East India sugar, and gurney bags, so called ought never to be used. The sugar bags are of an unreasonable weight, and both they and the gurney bags are of no value to the brewer; whereas the other bags are worth prime cost.

It is now common for those who have entered considerably into the cultivation of hops, to build houses over their kilns, which, in wet weather, are very convenient; otherwise, a kiln in the open air would, in my opinion, be preferable. It is necessary to have these buildings well ventilated with doors and windows; and to have them kept open night and day, except in wet weather, and then shut those only which are necessary to keep out the rain. If a ventilator was put in the roof of the building, directly over the centre of the kiln, about six feet square, built like those in breweries and distilleries, I am of the opinion they would be found very advantageous. I have seen many lots of hops much injured, both in color and flavor, by being dried in close buildings.

Where the houses over the kilns are built large, for the purpose of storing the hops as they are dried,—which is a great saving of labor,—a close partition should be made between the kilns and the room in which the hops are stored, to prevent the damp steam from the kilns coming to them, as it will color them and injure their flavour and quality very much.

I expect that many of our farmers will object to the mode of manuring hops which I have recommended, their common practice being to put the manure in the hills when they plant the hops, and afterwards to apply the manure on the hills at the first and second hoeings. I find the hop-roots are very liable to be injured by worms, and to decay. My opinion is, that the manure in the hill has a tendency to produce the worms, and its fermentation at their roots to cause their decay; and that the crop is not more, if as abundant, as when manured in the manner I have recommended. And further, that a hop yard manured in this manner, will continue in a healthy state for many years.

I also expect the quantity of manure I have recommended, will be objected to by many, it being the common received opinion that hops should have little or no manure. I find it a general complaint amongst the farmers where hops have been cultivated many years, that the quantity raised per acre does not exceed the one half raised by their ancestors, on the same land; inferring that the "hops are running out," as it is termed, and cannot now be cultivated to advantage. Hops, I believe, in common with all sorts of grain and vegetables, flourish best and produce the finest crops, when cultivated on new lands which require little or no manure—and such were the lands which their ancestors cultivated. The same complaint I presume would be made against all sorts of grain and vegetables, if raised with little or no manure, on lands that have long been cultivated.

From my own observations I am confident that no crop can be more improved and increased by high cultivation than hops.

AGRICULTURE.

TO THE EDITOR OF THE AMERICAN FARMER.

DUB GRASS.

Darien, August 12th, 1823.

DEAR SIR,

Inclosed you will receive a drawing, taken from the 5th volume (octavo edition) of Sir William Jones's work, and in the same paper a specimen of grass, which I conceive, or rather am satisfied is the same. Two or three years ago, Mr. Crawford, among other things, forwarded to Georgia, a small quantity of the *dub grass*, which had been brought from India for him, as a grass of great value. From the dry specimen, I then considered it as our Bermuda grass, but it was only the other day, from accidentally turning over Sir William Jones's work, I was satisfied of the fact. I am fearful that the fructification being so tender and minute, will be destroyed before you receive it. This grass is not only the best feed for cattle, but is capable of feeding more stock than any grass we are acquainted with. Every where in the southern states, you find small parcels of it about the house, but justice has never been done it, from an apprehension of its getting into the fields, where certainly it is much to be dreaded, as it is not again to be eradicated, for it would place the plough and the harrow at defiance; or rather they would increase its luxuriance. This grass is very sensible here, as in India, of drought above ground, but a single shower renews its vegetation. It should be grown in meadows, apart from other fields, where, too, it does best.—Fifteen acres of it opposite Savannah, which was land embanked from the river, fed, as I am informed, twenty head of horses, forty head of cattle, and one hundred sheep, under a former proprietor. Anxiety to keep it out of the rice fields, has been the cause why it has not been cultivated in such situations.

In your 3d vol. I see a letter from a gentleman in Bengal, to Dr. Mease of Philadelphia, giving directions about making indigo. This sounds a little curious to those who know that it was a Mr. Gray, who went from Georgia, at the commencement of the revolutionary war, and who carried the American mode of manufacturing indigo to Bengal. Before that the Hindoos made indigo for their own use, but not for export; and in a manner that would never have been injurious to us. They employed two or three earthen vessels, into which they put small bundles of indigo, and then poured warm water upon it; and after steeping a little while, they took out the indigo weed, added a small quantity of lime water, and, with ladles, stirred the fluid, until the fecula separated. All this is to be seen in the Asiatic researches and Asiatic registers, and probably may be remembered by the venerable Mr. Law. Mr. Gray was a young man of cleverness, in the employment of a Mr. Bowman of Charleston, making indigo on some plantations of his below Savannah. But differing in politics from his employer, he probably obtained letters to England, and patronage which carried him from there to India, where he introduced large steepers which would contain an acre of indigo weed at a time, and large beaters which would hold the contents of the steeper. The description of each is tolerably correct in the letter alluded to. Mr. Gray returned to England some years back a man of fortune and consideration. I have myself believed, that the indifferent quality of our indigo was attributable to the badness of water on the Sea Islands, where it was principally cultivated; for how could it be expected that a delicate dye could be extracted where the menstruum that was employed was a turbid water, surcharged with salt and other extraneous substances: and what has confirmed me in this opinion is to have seen through our pine country, in our domestic manufactories, some of the most beautiful, the most intense, and the most permanent blues, formed from indigo grown and manufactured in that quarter. And this pine region is not more distinguished for its health, than for the excellence of its water, found in pure white sand at the bottom of deep wells, sunk through hard and ponderous clay. If ever, therefore, indigo is again a staple in this country, it should be cultivated in that region. The quantity grown to the laborer, used to be four acres, producing from 20 to 25 lbs. per acre. At the present price of indigo, this would very well remunerate, but was nothing at 50 cents pĕr lb. It is a crop, however, like flax and hemp, unpleasant, and even offensive in its preparation.

One of your correspondents makes some enquiries as to the mode of planting the palmetto royal, or Spanish bayonet, as a hedge. There is nothing so easily raised. If a trench is made, and the stocks cut, and laid down horizontally two or three inches under the ground in the fall or winter, it will sprout along the stem every few inches, and in 12 months will make a fence of fair appearance. It is so easily done that an old man of mine went round 27 acres in a month or two. But it is only a fence against strangers. As soon as cattle and hogs are acquainted with it, they take to eating it as freely as so much clover. My fence has been completely destroyed by them, although it was beautiful for a season and was protected by a deep ditch.

I am fearful that the high expectations formed of the *guinea grass* will fail. My neighbors and myself have tried it repeatedly, and although at each time, flattered for a while, with finding some means of perpetuating it, have in the end failed: and this is the difficulty, for the seed vegetates irregularly and reluctantly, and the roots are, nine times out of ten, destroyed by the winter frosts.

I have seen some remarks from a Pensacola correspondent respecting the *kermes oak*. We have plenty of it growing about Darien, and if you desire it, can send you some branches with the balls upon it.

Very respectfully, dear sir,
Your obedient servant,
T SPALDING.

The grass enclosed, together with the drawing, has been sent to an eminent Botanist, for his observation and remarks.—*Edit. Am. Far.*

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

GUINEA GRASS.

Oaken Grove, Jefferson County, (Geo.)
26th August, 1823.

Sir,

The guinea grass has exceeded my most sanguine expectation; on the 25th April 1822, I sowed the small parcel of seeds (that you were polite enough to send me,) in my garden, in drills five feet apart; in the month of August following, the grass was 12 and 14 feet high; in the month of September, when it shot out, it was 15 and 16 feet high—a rich luxuriant crop, which shaded the ground completely from the rays of the sun; from the above portion of seeds I got better than half a bushel—after distributing many portions in my vicinity, I planted a large lot, on the 21st of April last, in drills six feet wide, on dry upland, rather sandy, what we call good bottom land in this section of the state—the original growth was oak and hickory, on this soil it grows without difficulty; on this day, the 26th August, it is on an average 10 feet high, and completely overshadows the ground, notwithstanding the wideness of the drills. I think it would easily bear three cuttings during our summer, though as yet I have cut the part, that I do not wish to stand for seed, but once, and this again is five feet high and upwards—I think four or five feet is the best height for cutting; when it stands longer, the stems become too thick, and it is hard to cure it yields an immense fodder from the quantity of ground planted, and the cultivation of the crop is very trifling.

An estimate of what it would yield per acre, would indeed appear to be wonderful, until our citizens become a little better acquainted with its cultivation—however, I have little doubt but that it will become very desirable in some parts of our southern states.—Last year the seeds came to complete perfection, and are much more hardy than I could conceive, as those seeds that fell from the grass, before I gathered the remainder in the month of October. remained on the ground all winter, came up in vast abundance on the first days of May following—from which, I would infer that a short time before this period, would be a good time for sowing the seeds, and if we suffer the grass to come to perfection, we will be in no danger of losing the seed.

As all our trials to form meadows, in the end, prove abortive with us, I have hoped that in the guinea grass we have found a good substitute, as it appears perfectly adapted to the warmth of our soil, the moisture of our atmosphere, and the intense heat of our sun.

Respectfully your's, &c.
ROBERT LOWRY.

J. S. Skinner, Esq.

* * *

HARDY RICE SEED—from Governor Clinton.

TO THE EDITOR OF THE AMERICAN FARMER.

Albany, 25th August, 1823.

Sir—I have lately received from Joseph Sabine, Esq. Secretary of the Horticultural Society of London, a small package containing hardy rice seed from Ivomlah, a district in Napal, situate north-west from the great valley adjoining to Hinimalen, and about six weeks journey from Ralmandu. It was procured from [illegible] by the intercession of the British agent through the Court of Ralmandu; and it was accompanied by the following memorandum

"Mode of sowing and cultivating the rice commonly called Ivomlah Dhan. Take the quantity of grain you intend to sow, and having collected it into a heap in any cool place, cover the heap entirely with layers of moistened earth and rich manure mixed together. In the course of ten or twelve days, the grains of rice that have been thus covered up, will sprout and send forth green shoots. Whenever this operation takes place they are ready for sowing. The ground on which you intend to sow must be prepared as follows. It is to be plentifully covered with water, and ploughed until the water becomes well mixed with the earth. The grain is to be strewed upon the ground whilst in this saturated state, and it will assuredly thrive. Should it appear to require water afterwards, as the crop advances, water must be given."

From the position of the country of Napal, which, I believe, forms one of the ridges of the Hinimaleh mountains, I take it for granted that the Ivomlah Dhan is a hardy grain, calculated for a climate considerably cold. It may probably suit Marlyand—and with a view that the experiment may be made, I have sent a small parcel of the seed, under a persuasion that you will dispose of it in a way best calculated to promote the interests of agriculture.

I avail myself of this opportunity to forward a discourse, which I hope may amuse a vacant hour, if any such occur in your well employed life.

I am,
With great consideration,
Your most ob't servant,
DEWITT CLINTON.

J. S. Skinner, Esq.

The following extracts are made from the Editor's reply to Governor Clinton, that it may be known hereafter what disposition has been made of his offering; and that the result may be more certainly ascertained, we have requested a friend to furnish us with an account of the trial making to cultivate rice on the Eastern Shore of Maryland.

Editor American Farmer.

Baltimore Post Office,
30th August 1823.

DEAR SIR,

This day brought me your favor of the 25th of August, and along with it a small parcel o rice seed, which is the more acceptable, as a considerably extensive experiment is now making in the reclamation of the marsh lands, near Vienna, on the Eastern Shore of this State, by some gentlemen of South Carolina, with a view to the culture of rice:—To this enterprise they have probably been tempted by the very low price of such lands in this state:—To ensure to it the most favourable result it will be of importance to have obtained this small supply of "hardy grain calculated for a climate considerably cold."

The apprehension to be entertained is, that its germinating quality may have been destroyed by exposure to atmospheric influence, as I see it has been recently stated, by a committee of the South Carolina Agricultural Society, as one of the remarkable properties of this grain, that though almost imperishable as food, and though growing freely after being deeply buried many years in the ground, yet when exposed to the influence of the atmosphere, its vegetating power can scarcely be preserved beyond the year.

You may rely on my making such disposition of your offering of this precious grain, as will afford the best chance of a successful result, happy in the opportunity of serving the most numerous class of my patrons.

* * * * * *

The first leisure hour which may present itself, in the course of toilsome duties, shall be appropriated to the perusal of your discourse, from which I anticipate both pleasure and profit. Your essay on the habits of the Columbia Pigeon has been given to the Printer of the Farmer, as an interesting contribution to our stock of natural history—and here permit me to use this occasion to mention a curious fact which I have often observed in regard to the common grey squirrel of our country—*the castration of a large portion of the males*—any one in the habit of shooting them, will recollect that many of the males are found to have been emasculated at an early age. For this extraordinary and cruel mutilation, some reason must exist in the economy of that animal; we might suppose it to be the desperate but necessary device of a policy, teaching them to keep the increase of the species within the diminishing means of subsistence in old settlements; but that end would be better attained by extinguishing the power of generation in the *female*. Can it be to prevent by anticipation, the fierce contention and exterminating battles, that would ensue from a too great proportion of males to females, as in the case of some other animals? But I forbear to trouble you with conjectures as to the cause or the object of a fact, about the existence of which, only, do I feel assured; and would not have mentioned the fact itself, but that I do not recollect to have observed any such measure in the police of any other family of the animal kingdom—nor have I seen this one alluded to by any naturalist.

With great respect sir,
I remain your obedient servant,
J. S. SKINNER.

TO GOV. CLINTON.

Extract from Gov. Clinton's answer.

"The fact which you mention respecting the castration of a large portion of the males of squirrels is an anomaly in natural history. By whom is the mutilation inflicted? The old males, the mothers or young rivals? Does it extend to all the species, or is it confined to the common grey or black squirrel?"

WOOL.

A Mammoth Fleece.—On the 2d June, Aaron Sherwood, of Bennington, Vt. sheared from one sheep eighteen pounds and fourteen ounces washed wool; which is of a good quality, and about sixteen inches in length. The sheep is four years old this season, and weighed, with the fleece on, one hundred and seventy eight pounds. This we believe to be the largest fleece ever sheared in Vermont, or perhaps in the United States.—*Bennington Gazette.*

On seeing the above in a Vermont paper, we wrote to Mr. Sherwood to ascertain the truth of the statement, and to ask,—the breed of the sheep—whether the fleece was not of more than one year's growth—if not, the weight of previous fleeces, and for a sample of the wool—to these enquiries we received the following prompt, polite and satisfactory answer. The fibre of the sample received is as stated—about 16 inches long.—*Edit. Am. Far.*

Bennington, September 8th, 1823.

Mr. Sherwood received your letter of the 3d August, and wished me to answer it.

The statement as to the amount of wool, is correct. He further says, that when the fleece was taken off it weighed 24 lbs. 6 ounces, owing perhaps to the dampness of the wool. The sheep having been washed three days previous to the shearing; he then dried it thoroughly in the sun, and it weighed as stated.

The buck was said to be a full blooded merino, of the Livingston breed, the ewe perhaps half merino, and of the common sheep of this country.

The sheep was never before sheared—these facts may be relied on.

He sends you a sample agreeably to your request.

The sheep was remarkably covered on his head and legs, so that he looked more like a bundle of wool, than a living animal.

For AARON SHERWOOD,
DAVID ROBINSON, Jr.

I rather expect, myself, that the buck was not quite what was represented to Mr. Sherwood, though nearly so.

TO THE EDITOR OF THE AMERICAN FARMER.

RACE HORSES.

SIR,

In a Petersburg newspaper of the 11th of July, I have read a piece extracted from the "Farmer," under the head of "THE HORSE," which seems to have for its object the repressing of a spirit that has slept too long, and has but very lately begun to revive: I mean the breeding and training of THE GENUINE BLOOD HORSE. In opposition to the experience of "one of your constant readers," &c. &c. I will not oppose my own, but confidently rely upon that of every distinguished writer on the subject, among whom I would refer more particularly to John Lawrence—meanwhile I shall endeavour as concisely as possible to note some of the more glaring errors of your "constant reader."

1. "The race horse is long backed," and "flat-sided." This is not generally true: neither is it necessary for him to be "not less than sixteen hands high:" nineteen out of twenty not reaching that height.

2. "The race horse is a stumbler." When this is the case, it proceeds from his being trained very young to throw his whole weight on his shoulders. Put him in the riding house, and teach him to carry his chief weight on his haunches, and you will not find him to be a stumbler. His "thin deep shoulders," "narrow breast," and "clean legs," are the best securities against stumbling. The difference between him and the cold blooded horse, is as a carriage on springs to a cart. It is notorious that the best saddle horses ever bred in Virginia were of "the good old stocks," enumerated by your correspondent, which were the highest bred horses and best racers of their day. To this blood the cavalry of Washington and Lee were indebted for their superiority over any other on the continent; "*unfit*," as your "constant reader" pronounces it to be, "for the purpose of war," and the true cause of "the superiority of the saddle horses thirty years ago" is to be found in the superior pedigrees and performance of their sires and dams, when racing flourished all over the state.

So far from being "unmanageable," "vicious," or "timid," they have been reproached with sluggishness. I never saw a thorough bred horse that, on the first trial flinched from the firing of a gun off his back: I never saw a cold blooded horse that would stand fire. They are dangerously subject to take fright.

The blood horse is originally from a hot climate and arid soil; and where the base born suffocates with heat, and faints with fatigue, his wind and strength are untouched. Our sun burnt fields are green pastures to the deserts of Arabia, but we require the blood which is patient of hunger, thirst, heat, and labour, and that is the genuine Arabian. It will not bear exposure to wet and cold, so well as the other, neither does it produce the fastest trotters: in every other respect it has the decided advantage. "The long slouching walk," tells on the road and in the plough, especially on a hot sultry summer's day.

4. I knew the late Col. John Hoomes, of the Bowling Green, well, and a most valuable man he was. He imported some very bad stallions that have much injured our breed of horses; but we are indebted to him for the sire of Sir Archey, whose dam also was imported. Peace and honour to his hospitable memory!

5. The English have injured their breed of horses by training two year olds, and even yearlings, and running short races with light weights. Newmarket, and Epsom, and Doncaster, have doubtless melted princely fortunes, but where one has perished on the turf, a hundred have been ingulphed in the "Hell's," and subscription houses of St. James's street and its neighbourhood. We have put down billiard tables effectually, nearly abolished cards and dice, and racing has been unknown, except in some three or four counties. Meanwhile the gambling spirit, inherent in man, has taken the direction of *bank stock*, *town property* and *wild lands*. What has been lost at these games? It were curious, but, I fear, impossible to tell, although we see the losers every where; the winners no where.

A traveller, *not* "sixty years since," gives the following picture of our horses.

"There are races at Williamsburg twice a year. Their purses are gained by the horse that wins two four mile heats out of three. They amount to £100 each, for the first day, and £50 each every day after; the races commonly continuing for a week. There are also matches and sweepstakes very often for considerable sums.—Besides these at Williamsburg, there are races established almost at every town and considerable place in Virginia; and frequent matches, on which large sums of money depend; the inhabitants, almost to a man, being quite devoted to the diversion of horse racing.

"Very capital horses are started here, such as would make no despicable figure at Newmarket; nor is their speed, bottom, or blood inferior to their appearance; the gentlemen of Virginia sparing no pains, trouble, or expense, in importing the best stock and improving the breed by judicious crossing.

"Indeed nothing can be more elegant and beautiful than the horses bred here, whether for the turf, field, road or coach; and they have always fine, long, full flowing tails. Their stock is from old Cade, old Crab, old Partner, Regulus, Babraham, Bosphorus, Devonshire Childers, the Cullen Arabian, Cumberland Arabian, &c. in England, and a horse from Arabia, named the Bellsize, which was imported into America, and is now in existence.

"The Virginians of all rank and denominations, are excessively fond of horses, and especially those of the race breed. The gentlemen of fortune expend great sums on their studs, generally keeping handsome carriages, and several elegant sets of horses, as well as others for the race and road: even the most indigent person has his saddle horse, which he rides to every place, and on every occasion; for in this country nobody walks on foot. In short their horses are their pleasure and their pride."

The best horses are now found, where the racing spirit has not been suffered entirely to die; in a few contiguous counties of North Carolina and Virginia. I cheerfully concur with your "constant reader," in devotion to "the good old stocks of Janus, Fearnaught, Jolly Roger, and Mark Anthony," &c. and where such blood, (and I may add that of Morton's Traveller, Kitty Fisher, Baylor's Shakespeare mare, Selima, and though last not least, Medley,) has been preserved undefiled, we need not look abroad for better. But I fear, where not extinct, it is greatly contaminated by unskilful and inconsiderate crosses. I am acquainted with but one breeder, who possesses it in purity.

PHILIP.

* * *

FOR THE AMERICAN FARMER.

SALIVATION OF HORSES.

MR. SKINNER,

Having seen in your paper of the 8th instant, some remarks on the salivation of horses, it put me in mind of a remark of a young Irishman who resides in this neighbourhood, "that if parsley seeds were sown with the clover seeds, horses would not be liable to salivation." The experiment is worth the trial, as no expense will be incurred thereby. I also recollect that several years ago, I saw a publication recommending the sowing parsley as a pasture for sheep, the writer having cured his flock of the rot by its use.

Your's &c.

A friend to Agricultural Improvement.

Raleigh 15*th August*, 1823.

☞ STRAWBERRIES.—If the opinion of Arator is correct that plants receive more nutriment from the air than from the earth, may not the runners of strawberries be necessary for the collection of that food.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

BOTTS IN HORSES.

Fountain-Rock, August 25, 1823.

DEAR SIR,

I have read in the American Farmer, of the 15th instant, a communication on the subject of botts in the stomach of horses, addressed "to Mr. Lundy," referring to an extract from a Lexington paper, purporting to be an effectual remedy for the botts, (that prescription I have not seen, having mislaid that number,) signed "A Subscriber"—I have made similar attempts to destroy them, after dissecting the maw or stomach of horses which have been killed by botts, but have discovered nothing would kill the botts (which I tried) that would not kill the horse, if given to destroy the botts while in the horse. I have concluded the only way to save or cure horses, when attacked by botts, is to extract or make the horse discharge them—I have found them troublesome to horses before they had eaten into, or fastened on the maw or stomach; indeed I have seen the botts collected in the throat of the horse, in such lumps or quantities, as to choke and kill the horse instantly; which will always be the case if relief is not given, by inserting into the throat a mop, or the hand of the groom to dislodge them, returning them into the stomach, when they so collect in the throat. The best and most effectual cure I have yet discovered, is to *dislodge* and *bring away* the botts, which I have done, by drenching the horse affected, with warm blood, say one or two quarts, or more if it can be conveniently obtained, as there is no danger in giving any quantity injuring the horse. As soon as the dose thus given, reaches the botts in the stomach, they will let go the maw or stomach to feast on the blood thus given—which gives the horse instant relief, but of short continuance if they are not speedily removed, which must be done by cathartics.—Say Linseed Oil, 1 quart, or such quantity judiciously given as will purge freely; keeping food, (except drinks, or bran tea warm) from the horse until the operation is over, during which gentle exercise is advisable, when it will be found the botts will be freely disharged in so healthy a state, that acquafortis will be found scarcely sufficient to kill them—I have during the month when soft corn (roasting ears) were to be had, given the horse of them to eat plentifully in preference to oil—they purge freely, and the slime brings the worm away forcibly. I have often tried this remedy after all efforts were suspended, and have rarely known it fail, and never when first used, or before the bott had eaten thro' the stomach. I was led to the experiment of giving blood, from the reflection that it was the food of the bott, which they were in pursuit of—to obtain it I always have recourse to one or more of my healthy strong horses, as the quantity desired may be. Though I have bled in the neck, and used the blood of the horse affected, (when no other horse was convenient) without any hesitation, and I believe it will not be found injurious to bleed horses occasionally when in health, but rather beneficial to most horses.

I have known horses relieved when attacked by botts in some instances, by killing the dunghill fowl and taking the entrails while warm and cramming them into the stomach of the horse, though I have not myself confidence in its curing or relieving, where the botts have taken fast hold—to prevent botts, burn hickory wood into ashes and keep on hand for use, giving once a week about one pint to each horse in his food; if oats, wet and sprinkle the oats; the horse will eat them without objection, and I think it, perhaps, the means of keeping horses in health, where they would, without the ashes fed, *have been diseased* from other causes, which your own investigation will, no doubt, inform you they are subject to.

I give you the trouble of reading this reluctantly, leaving it for gentlemen of more leisure and experience to attempt instruction or edification.

NIMROD OWINGS.

☞ Our distant readers are warned that they may have confidence in what they see from the pen of our correspodent above, in relation to that noble animal, the horse.—Mr. O. is known to possess a stock of very superior horses, and to be one of the best judges and masters of that animal in this country.—*Edit. Am. Far.*

* * *

From the New-Brunswick Times.

It may materially promote the interests of agriculture, to offer, through the medium of your paper, a few remarks on the culture of Lucerne. This article (frequently denominated French clover,) I have found by experience to be not only one of the most convenient, but also the most profitable of any grass which can be cultivated. It vegetates quicker in the spring than any other grass, it resists the effects of droughts—it may be cut four or five times in the course of the season, and it will endure for at least twelve years without being renewed—of all other grass, it is the most profitable for soiling—I am fully of opinion, that one acre properly got in would be sufficient to maintain six head of cattle, from the first of May until November, for before it can be cut down in this way, the first part of it will be ready for the scythe. English writers have recommended the drill system for this article, but in this climate I have found this to be entirely fallacious. The proper mode to be adopted is, to have your land in good order, to sow it broad cast, and to get the seed in during the month of April or May. The plan I would recommend, would have to sow at the rate of 15 to 20 pounds to the acre to be sowed with it. The effect of this is, that the rye vegetates quickly, and serves as a nurse to the young grass, against the heat of the scorching sun, and by the time the grass attains sufficient strength to protect itself, say in four or five weeks, the rye withers and apparently dies. In the spring, however the rye will again come forth mixed with the Lucern, will add much to the quantity on the ground, and prove a most excellent feed for cattle. The rye cut green in this way, and before getting into seed will admit of being cut two or three times in the course of the season, with the lucern, before it decays.

The kind of soil most suitable for this culture, is a dry mellow loam—but a sandy or clay loam will also answer, provided it is not wet. In a favorable season, the Lucern may be cut the next fall after sowing. After the first season, you may generally begin to cut green for cattle, by the first of May, which saves your young pasture and is, in every respect, a very great convenience, as hogs and every description of animals devour it with equal avidity. Backward as this season has been, I have been furnishing a copious supply every day to seven cattle, since 5th May, inst. The seed can be procured at Thornburn's or other seed stores in New-York, at 40 to 50 cents per pound.

A NEW-JERSEY FARMER.

Perth-Amboy, May 15, 1823.

EXTRACTS FROM LATE NUMBERS OF THE

London Farmer's Journal.

An extraordinary Yearling Ram has been bred by Mr. Howgate, of Hay Park, near Knaresborongh. He was yeaned in 1822; has had no other extra food than a few oats and beans; he was shorn on the 21st April, 1823, which produced 17½ lb. of good without salve: live weight, without wool, 17 st. 4 lb. (14 lb. to the stone*) he stripped kind and handsome. Mr. Howgate also bred his sire, dam, dam's sire, and grand sire; all which are pure Leicester: this account is correct, though stated rather different in some other papers.

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* 242 *pounds.*

Trotting Match for Two Hundred Sovereigns.

The sporting match between Capt. Millard's bay horse, Godolphin, and Mr. Harrington's brown mare, took place on Monday, over two miles of turf at Wroxham, Essex. The match was to trot 18 miles against each other, and to carry nine stone. The horses started at opposite ends, and the race was won by the mare easy in the last two miles. She performed the task in 68 min. 57 sec., the horse in 69 min. 25 sec. The horse was backed at 5 to 4 after the first two miles.

Mahratta Justice.—The Prime Minister himself perambulates the bazaars, or market-places; and if he should happen to detect a tradesman, selling goods by false weight or measure, this great officer breaks the culprit's head with a large wooden mallet kept especially for that purpose.

Magnetism.—It is recorded and generally believed by Mahomedans, that the tomb of their Prophet is supported in the air, at Mecca, by the action of equal and potent load-stones. The possibility of such an occurrence has been justly ridiculed as false and fabulous. Notwithstanding, it appears from the *Leeds Independent*, that it is practicable to suspend a person by these means. Mr. Abraham, lecturer on this subject, by way of illustration, suspended by means of an artificial magnet, a young gentleman, who, with the apparatus, weighed upwards of seven stone.

Died a few days since, at Preston, in a fit of apoplexy, the Rev. John Harrison, Incumbent Curate of Grimsburgh, near Preston, and late one of the Masters of the Free Grammar-school at the latter place. This gentleman was preparing for publication an *Etymological Enchiridion*, great part of which is printed; and what renders it more remarkable is, that at the time of his death, he was transcribing part of the copy, and that moment finished writing the line "subpœna, a *summons*," the ink of which was wet on the paper when he was found a lifeless corpse on the floor, his spirit having been *summoned* to the bar of the Almighty.

Died on the 8th inst. at Oatley, suddenly, Miss. M. Ward, of that place. She had been so excessively terrified by the thunder-storm of that day, as to be thrown into strong convulsion fits, which defied all medical and surgical aid, and terminated in her death the same evening.

A woman residing in Duke-street dreamt one night last week, that her house was on fire, and actually got up in her sleep, and made her way out of the house, then suddenly returned, ascended the stairs, and was upon the point of getting into bed, when she awoke; being terrified by the remembrance of her terrific dream, she shrieked, and the fright had the effect of turning the whole mass of her blood. The pressure seems to have centred in her hand, which is frightfully swelled—we are grieved to add, that her medical attendant fears mortification will ensue.—*Brighton Herald.*

A man and his wife, living in Sandgate, Newcastle, having quarrelled on Tuesday last, the wife, in a fit of passion, threw one of the children behind the fire, and before it could be rescued, it was most dreadfully burnt and scorched in varions parts of the body. The poor child was conveyed as soon as possible to the infirmary.

By a comparison of expenses attending parish work-houses throughout Devonshire, up to Midsummer, it appears that, on an average, they amount 27d pence per week for each person therein; the greater at 30d. and the lesser at 22d.

The French are at an enormous expense in Spain—not less, it is calculated than two millions of francs per day! The country is so exhausted, that the Regency of Madrid have called on the French Government to pay its numerous Secretarial, the Ministers, and the Public Functionaries of Madrid. The conduct of the Regency does not please the French Cabinet.

The King of Sweden's son, the Crown Prince Oscar, married at Stockholm, on the 19th June, the Prince Leuchtenberg, who is daughter of Prince Eugene Beauharnois of Josephine, late Empress of France.

Madame de Reboul, who was instrumental in converting Loveday's daughters to Catholickism, in Paris, for her talent in the art, and as a compensation for the persecutions she then underwent, is thought by King Louis worthy of being canonised and is now therefore Saint Reboul!

The Sir William Curtis, which sailed on Friday for the river, has on board £100,000 in specie for the Russian Government; also two bulls and two cows, of the best English breed, purchased by Count Lieven for the Emperor of Russia.

An arrangement has taken place between the Directors of the Bank and the East India Company, by which the former agree to lend the latter £2,000,000 sterling, for two years, at the rate of 3½ per cent. interest, on the security of stock.

A Frenchman being afflicted with the gout, was asked, what difference there was between that and the rheumatism. "One very great difference!" replied Monsieur—"Suppose you take one vice, you put your finger in, you turn the screw, till you bear him no longer—dat is de Rheumatis—den, spose you give him one turn more, dat is de Gout."

USEFUL RECEIPTS.

Flannel Cakes.—Two pounds of flour, six eggs well beaten, one wine glass of yeast, a little salt, wet it with milk into a thick batter, and set it to rise, bake them on a griddle.

Cocoa-Nut Pudding.—Half a pound of butter and half a pound of sugar beat to a cream, the whites of eight eggs well beaten, half a glass of brandy, wine, and rose water; and half a pound of cocoa-nut grated fine, and mixed in together by degrees. This quantity will make three puddings. One cocoa-nut is half a pound generally.

Lemon Pudding.—Half a pound of butter and half a pound of sugar beat to a cream, five eggs beat to a high froth, grate in the rind of one large lemon, and squeeze in the juice, then add half a glass of brandy, wine, and rose water, (the three together to make the half glass.)—Two puddings.

Pumpkin Pudding.—Half a pound of butter, half a pound of sugar, beat to a cream, one pound of pumpkin, stewed and passed through the cullender, four eggs, one wine glass of brandy, wine, and rose water, one tea-spoonful of spice.

Potato Pudding.—One pound of butter, one pound of sugar, beat to a cream, one pound of potatoes boiled and passed through the cullender, eight eggs, one glass of brandy, one of wine, half a glass of rose water, one tea-spoonful of spice.

Orange Pudding.—One pound of butter, one pound of sugar, beat to a cream, one glass of brandy, wine, and rose water, ten eggs beat to a high froth, pare two oranges and boil the rind till it is tender, (change the water twice or three times) then beat it in a mortar, and squeeze in the juice together with the rind of one lemon grated, and the juice of the same. For apple pudding, add four large spoonsful of strained apples to each pudding.

Almond Pudding.—Half a pound of butter, half a pound of sugar, beat to a cream, half a pound of almonds blanched, and beaten very fine; beat them well together and add five eggs, one wine glass of brandy, wine, and rose water. Two puddings.

Tomata Catsup.—Wipe the tomatas clean, and slice them in a deep pan, to every layer sprinkle a handful of salt, let them lie twelve hours, put them in a skillet and let them boil four or five minutes, then strain them through a coarse cloth, to get all the juice, pour it in the skillet again, and boil it briskly thirty minutes; to one quart of liquor add a quarter of an ounce of mace, ginger, and half a quarter of an ounce of white pepper, strain it through a thin cloth, and when cold, bottle it, and cork it tight; put four or five blades of mace, and six cloves in each bottle, and some nutmeg. Shake the bottle when used.

TO PREVENT WOOD BLOCKS FROM WARPING.

When the blocks are not in actual use, and especially after being wet, let them be taken out of the form, or exposed to the air so as to dry equally on both sides. If taken out of the form when wet, let them be set up on end or edge to dry, but not in the sunshine or near a fire.

Expensive blocks intended to furnish a great quantity of impressions, ought to be washed with spirits of turpentine, and not wet with any thing else.

When blocks have already warped or sprung, place them on a damp cloth or paper for a few hours, with the rounding side up.

When straight set them up on end to dry.

Unexperienced and careless workmen are too apt to leave them on the stone or elsewhere, with the bottoms very wet, and sometimes at least one fourth immersed. This causes the bottoms of the blocks to expand, while the face remains of the original size; of course it warps, and the ends become too high, and the first impression from it in this situation generally splits it, which the above suggestions if attended to, will prevent.

The Tomb of Napolean Bonaparte.—Several officers of a British vessel visited the tomb of Bonaparte in May last. The place where this great chief lies, is called Rupert's Valley, and is said to have been a very beautiful spot. It excites much interest, and all visitors to the Island repair to the tomb. Twelve hundred persons visited the spot last year. One of the officers above mentioned says—"We sat down, John Bull like, about twenty of us, and very unsentimentally emptied our basket and drank "Peace to his shade." Being anxious to have something to shew that we brought from the tomb and his house, we cut slips of geraniums and weeping willows, and part of the branch of one of the trees large enough to make a snuff box."

* * *

It is estimated that the extent of the water and gas pipes under the pavements of London, is between one thousand and one thousand two hundred miles! The roads of England only are above fifty-six thousand leagues—more than one hundred and twenty thousand miles—five times the circumference of the globe!

* * *

Prize Ox.—The Ox which obtained the first premium at Brighton, has been purchased and slaughtered by Mr. Walter Welsh, of this town, and will be for sale this day at his stall No. 4, Fanueil-Hall. He was fatted by Mr. Josiah Morton, of Hatfield; and weighed as follows:

	lbs.		lbs.
Fore Quarter,	443	Tallow,	169
Do.	442	Hide,	155
Hind Quarter,	336		
Do.	353	Total,	1898

Boston paper.

Editorial Correspondence.

Extract from Nelson County, Sept. 3d, 1823.

"The crop of wheat generally very fine with us, better than they have been since 1820. The rye is better than I ever saw it. The oat crop, not so good—the crop of corn, which is now made, is a very abundant one:—I think there was much more than an average crop planted, owing to the great scarcity, and very high price of that article for the last two years. The corn crop being larger, the tobacco crop is consequently smaller than usual, but what is in cultivation promises to turn out well. The clover sown last spring has taken, with me, better than it ever did."

☞ INFORMATION REQUESTED.

You will greatly oblige me, and probably a great number of your subscribers, by giving any information you may possess, or be able to procure, as to the erection of grist or saw mills, upon brick instead of stone foundations. Has the experiment ever been made, and has it been found to answer well, and be impervious to water? If it has, then how thick were the walls at the foundation, and at top, and will they answer where the head of water is from 10 to 15 feet high? What is the best and cheapest cement for such walls? and will not the brick moulder away when they come in contact with the water? Information upon these points, as well as any other, which may be deemed important for a man desirous of making the experiment, will be thankfully received by your friend.

W.

Edisto Island, S. C., September 14, 1823.

Sir—It affords me great pleasure to state that an association has recently been organised on this Island, under the style and title of "the Agricultural Society of St. John's, Colleton, S. C." The Constitution of this society would have been transmitted for publication, but as its provisions differ in no essential points, from the fundamental articles of any similar institution, it was deemed unnecessary.

The following are the officers elected for the ensuing year, to wit:

Joseph Jenkins, Sen'r. President,
William Seabrook, Sen'r. Vice-President,
Whitemarsh B. Seabrook, Cor. Sec.
Col. Joseph E. Jenkins, Rec. Sec.
Edward Whaley, Treasurer.

I have the honor to be,
Very respectfully,
Your obd't servant,
W. B. SEABROOK, *Cor. Sec.*

THE FARMER.

Baltimore, Friday, September 26, 1823.

In compliance with an invitation from the President of the board, the Trustees of the Maryland Agricultural Society, had their first meeting on Wednesday last, at Hampton.—It was gratifying to see the punctuality with which they attended at an early hour, and the cheerfulness and zeal with which they proceeded to make the necessary arrangements for the next Agricultural Fair and Exhibition, by the appointment of committees to award premiums—the designation of marshals, &c. After dinner the trustees, with other invited guests, were very agreeably entertained with a view of General Ridgely's fine stock of horses, cattle, sheep, and hogs, and at the close of the afternoon separated, with the understanding, that the next meeting will be held on Wednesday the 15th day of October at 10 o'clock, A. M., at Col. Nicholas M. Bosley's residence on the York turnpike. The proceedings of the day will be published in detail.

* * *

LATEST FROM EUROPE.—The old line ship Amity, Capt. *Maxwell*, arrived yesterday morning from Liverpool, whence she sailed early on the morning of the 18th of August.—It would appear from the remarks of *the Traveller* that the object of the Duke d'Angouleme in leaving Madrid, was to put a speedy termination to the present war, for which purpose he had actually opened a correspondence with a few members of the Cortes. His views were, however, defeated in consequence of the refusal of the Cortes to enter into any negociation unless through the mediation of England, which of course the Duke could not accede to. What will be the result of this state of affairs it is impossible for us to form any opinion.

[*New York paper.*

Liverpool, August 16.

COTTONS at the beginning of the week were excessively dull, the sales for the first three days amounting only to 1200 bags; on Thursday, however there was a revival of demand, which continued during yesterday, and a slight improvement in price took place in bowed. We still, however, have to quote an average depression of about ¼d per lb. from the quotations of Saturday last. Bowed have been chiefly sought after, and about 1500 bags principally of this description have been taken by speculators, scarcely any one of the trade having visited us this week. Brazils have been neglected, and scarcely any thing has been done in Orleans. The total sales amount to 4800 bags, viz. 2770 Boweds, 8 3-8 to 10d; 80 Orleans, 9¾d. to 10½d; 240 do. 11¼d. to 12d; 240 Tennessee and Mobile, 8¼d. to 9 7-8d; 145 Sea Islands, 15d. to 18d; 10 Stained do. 10d.

The transactions in Tobacco have been very limited, and prices are without alteration.

The arrivals of Stockholm Tar have become rather numerous, and prices have consequently receded a little; 1400 barrels have been sold at 16s. 6d.; some of the largest holders, however, still require 17s.

Montreal Pot Ashes have improved in demand, and 280 barrels have found buyers at 42s. to 42s. 6d.; Pearl Ashes also have advanced, 200 barrels having been sold at 39s. 6d. to 40s.; both descriptions are very firm at the advanced prices, and holders are very reluctant to proceed in their sales, even at the highest currency of this day. States' Ashes also are in demand and have found buyers at 43s. 6d. to 45s. for Pots; about 150 barrels have been sold.

The inquiries for Carolina rice, have been frequent, but not so frequent as might have been expected from the very unfavorable weather during the present week; 130 tierces have been sold at 17s. 6d. to 18s. 6d. for good old, and at 20s. for pretty good new, which is an advance of 1s. per cwt. Larger sales might have been effected, but the holders were unwilling to sell at the present currency.

The weather during the week having continued wet and unsettled, we have experienced rather an extensive demand for grain, and wheat has advanced 4d. to 6d. and Oats 1d. to 2d. per bushel, since Saturday last.

The Turkish fleet, consisting of 120 sail, among which are several frigates of the largest size, and 15,000 troops, sailed on the 4th June from Andre Capo d'Oro towards the Peloponnesus. The Greeks are preparing for the struggle, which it is anticipated will be an arduous one. Recent accounts from Tripoliza give a very favorable view of the affairs of the Greeks.

Private letters from Smyrna, dated June 2, state that it was the general opinion there, that a war would ensue between Russia and the Porte.

* * *

BALTIMORE MARKET.

PRICES CURRENT—corrected weekly.

Flour, best white wheat, $7—Howard street, from wagons, $6 87½ a 7—Superfine, $6 50—fine do. $6 25—Wharf, do. $6 25, cash—White wheat, $1 25 to 1 35—Red do. $1 18 to $1 23, a few sales at $1 25—Rye, 40 to 45 cts—Corn, 38 a 40 cts.—wharf Oats, 26 a 30 cts.—wagon Oats, 31 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50, per cwt.—Bacon, hog round, $10—Pork, $7 50 per c. lb., 6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, retail, $1 50, cargo price, 1 12½—Peas, retail, 75 a 80 cts., cargo price 58 a 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 28 to 30 cts. per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl., No. 2, $2 37½—Fine Salt, 60 to 65 cts. per bush., coarse, do. 70—Butter, (firkin) 14 cts. per lb—Eggs, 12½ cts. per doz—New Hay, $15 per ton, old do $18—Straw, $8.

Maryland Tobacco.—No sales.

To Farmers and others.

EASTMAN'S PATENT CYLINDRICK STRAW CUTTER.

The proprietor continues to manufacture the above machines, six doors above Eutaw, in Market-street, where he has a considerable number on hand for sale, and where gentlemen are respectfully invited to call and examine their workmanship, and witness their operations.—They are warranted to feed and cut with ease and facility every kind of long forage, straight or tangled, even corn stalks and cane tops. His smallest sized machines are capable of cutting from 60 to 70 bushels per hour, price $45 to 50.—His next size, price $60, from 80 to 100 bushels per hour. The simplicity and durability of these machines must render them an object to every farmer, particularly as they can be worked by the most awkward hands and by boys—All orders, money enclosed, will be punctually attended to.

JONATHAN S. EASTMAN.

N. B. He will dispose of the patent right for any state in the Union on reasonable terms.

Printed every Friday at $4 per annum, for JOHN S. SKINNER Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

INTERESTING EXTRACTS.—*From Agricultural and other Addresses and Memoirs, on file in the office of the American Farmer.*

An Address to the public from the trustees of the Gardiner Lyceum.

It will doubtless be remembered by the citizens of this state, that at the last session of the Legislature, an institution was incorporated by the name of the *Gardiner Lyceum*, the object of which was stated to be, "to give to mechanics "and farmers such a scientific education, as "would enable them to become skilful in their "professions." The trustees, having began an edifice of stone for the use of the Lyceum, and having made arrangements for the commencement of instruction the ensuing winter: think proper to give to the public, a more detailed account of the origin of the institution, and of the plan, upon which they mean to proceed.

The small number of mechanics acquainted with those principles of natural philosophy, upon which the successful operation of their arts depend, has been long a subject of regret. Artists, it is true, are found in various departments, who by means of uncommon natural talents are able to acquire the knowledge of those scientific principles which are most needful to them; but those to whom nature has been less liberal, can only execute in the way in which they have been taught; and while they adopt the rules and recipes of their predecessors, are obliged to perform much unnecessary labor, because they are unable to distinguish the essential from the accidental parts of their processes. And even those of superior endowments are obliged to spend much labor in acquiring principles, which are among the first rudiments of a regular education. Nor have our farmers hitherto had that knowledge, which would enable them to improve the powers of their soil, or the machines necessary for cultivating it, and preparing their produce for market. The knowledge necessary for these descriptions of persons is confined to colleges; but science is there taught, not to persons, who are to make a practical use of it in after life, but as a part of a course of general education to those, who are destined for the liberal professions. The details of the practical application of science to the particular arts would be altogether inconsistent with the objects of these institutions. Neither could those, who are to support themselves by manual labor, spare the time, or meet the expense of a collegiate course, with its long train of preparatory studies, particularly when a large part of that course would not only be useless, but would serve to give them a distaste for their future pursuits in life.

To supply this deficiency was the object of the projectors of the Lyceum; and although there was no existing institution to which they could refer as a prototype; yet they felt a confidence, that their views were so practical, and so obviously useful, and so easily carried into effect, that they must meet with the approbation of the public. Nor have they hitherto been disappointed. Having obtained what aid they could from the neighborhood, where the institution was to be located; they stated their views to the legislature, and the great benefits which they expected to be derived from the establishment of the Lyceum; but at the same time the inadequacy of their own means to carry it into effect, without pecuniary aid from the State. An act of incorporation was readily granted; and the trustees after mature deliberation determined to do every thing upon their part to carry the institution into effect, with confidence, that the legislature having approved their object and encouraged them to proceed, would not suffer their exertions to be lost, or the public to be deprived of the benefits of so important an institution for want of its fostering aid. Their plan has likewise received the approbation of many gentlemen of intelligence, some of whom have been engaged in the higher departments of instruction themselves, and others of whom have visited the most celebrated places for education in different parts of Europe. They have all thought the institution much wanted, and that if properly conducted, it could not fail of being highly useful, and of being the means of similar institutions arising in other parts of the country.

The practical utility of science cannot be doubted, in an age where its investigations have produced such astonishing improvements as in the present. There is scarcely an art, which has not directly or indirectly received from it important services, for science must necessarily be the foundation of every art. Not that the arts originate in the speculations of the philosopher, or cannot be practised without an acquaintance with science. On the contrary they frequently owe their beginnings to accident; and the knowledge of the art is but the knowledge of a few insulated facts. These facts, observed by the man of science, lead him to an investigation of their nature, and the laws according to which they are produced. He discovers what is necessary and what is accidental in the process, and thus infers an easier and cheaper mode of arriving at the same result. Chemistry, as a science, has scarcely existed half a century. and yet no science can so proudly boast its contributions to the arts. To many trades it is absolutely necessary; and to almost all, highly beneficial. The tanner, the bleacher, the dyer, the druggist, the manufacturer of pot and pearl ashes, of soap, of copperas, and all the salts of commerce, of spirituous and fermented liquors; all these and very many more find their arts dependant upon chemical processes. The mason needs chemistry to mix properly the ingredients of his mortar, the blacksmith to temper his edged tools, and even the baker to ferment his bread. It is true, these arts may be, and are successfully practised by attentive and intelligent persons, ignorant of science; but a knowledge of chemistry would enable men of an inferior class of mind to become skilful, would make the success of all more certain, enable them to investigate the causes of occasional failures, and to guard against their recurrence.

Agriculture, too, depends much upon chemistry. It is the business of this science to investigate the nature of soils, the causes of their fertility or barrenness, to ascertain the composition of manure, and the kind best suited to give fruitfulness to each kind of soil. The experience of Lavoisier, who in a few years, doubled his crops, is sufficient to prove the utility of chemistry, when applied to the cultivation of the earth.

But chemistry is not alone in its practical utility. All the sciences which come under the name of natural philosophy are useful. A knowledge of mechanics, which teaches the laws of motion, the general principles, upon which all machinery is constructed and operates, and the nature and laws of the various moving forces, is almost indispensably necessary to the practical mechanic, who is charged with the care or the construction of machinery. In the construction it will enable him to accomplish his business with more ease and certainty. The formation of the teeth of wheels and pinions, e. g so that machines shall neither be retarded by unnecessary friction, nor rendered irregular in their motions, which is difficult to an uneducated mechanic, is made perfectly simple and easy by science. The value of science is particularly felt by the mechanic, when any thing is to be accomplished out of the common course of his business. Instead of wasting his labors in guessing and trying ill-conceived experiments, the scientific mechanic knows at once, where to direct his efforts; and can predict with some degree of certainty, the result, before the experiment is made.

All machines are capable of modification and improvement; and it is not so much by the invention of new machines as by the modification of old ones, that ingenious mechanics have rendered so much service to the public. This is particularly the case in a new country. The expensive machinery of Europe, however useful among a dense population, could not be rendered profitable in a country with so thin and scattered a population and so little capital as our own; and where therefore machinery must be cheap, and easy in its construction before it can be of general utility. But a mechanic must be extensively acquainted with machinery, and the principles upon which it is constructed, before he is able by slight alterations to apply machines to new purposes; or so to simplify their construction as to bring into general use those, that were otherwise too expensive

With a view to furnish to farmers and mechanics the education here represented as so useful, the Gardiner Lyceum has been established; and the course of study will be arranged with a particular reference to the wants of those classes, for whose particular benefit it is designed. As soon as a suitable apparatus can be procured, lectures will be given upon the sciences there taught; and the application of those sciences to the arts will be illustrated as fully, as the nature of lectures will admit. As fast as the funds of the institution will allow, models will be procured of the best machines employed in the useful arts. Specimens will likewise be collected of the natural productions of the country, as opportunity offers; and they will be deposited in a cabinet in the Lyceum.

Candidates for admission to the Lyceum will be required to produce certificates of good moral character, and will be examined in the four fundamental operations of Arithmetic; Addition, Subtraction, Multiplication, and Division, both upon simple and compound numbers, and in Reduction. It is also very desirable, that English Grammar should be understood by those entering the Lyceum; and although the trustees do not at present consider it as an indispensable requisite, yet they hope it will have been studied by persons, applying for admission. The studies at the Lyceum will be—

For the first year. Arithmetic, Algebra Geometry, the Trigonometry, Mensuration of Surfaces and Solids, and Book Keeping.

In the second year. Surveying, Navigation, Mechanics, Hydrostatics, Pneumatics and Chemistry.

No student will be required to attend to all the branches of instruction for the second year; but only those, which are best adapted to his future wants. He will likewise be instructed in the practical application of the knowledge thus acquired to the particular art, which he is to practice.

Two years will complete what is deemed an essential course; but instruction will be afforded to those who wish to continue their studies another year.

The studies for the third year will be—

Other branches of Natural Philosophy, the higher branches of Mathematics, Natural History, and the first volume of Stewart's Philosophy of the Mind.

There will be regular exercises in English composition; and each Monday morning all the classes will be instructed in the principles of natural and revealed religion. There will be three terms, and three vacations in each year. One vacation will be of five weeks from the first Wednesday in July, one of two weeks from the third Wednesday in December, and one of the two weeks from the first Wednesday in April. The price of tuition will be eight dollars a term. Four students of good talents, but needy, will be admitted without charge. Boarding and lodging can be obtained near the Lyceum at one dollar and a half per week.

The trustees consider the location of the Lyceum in the town of Gardiner as peculiarly fortunate, from its central position, on a navigable river, in a populous neighbourhood and fertile country, where commerce is continually extending; and in a town possessing uncommonly fine mill privileges, and which already offers to the student in mechanics the exhibition of a greater variety of machinery moved by water, than can be found in any other town in the State. In the first organization of an institution, so novel in its nature, it seemed necessary, that the trustees should be selected from its immediate neighborhood, for the convenience of frequent meetings; but this necessity will no longer exist when the institution is fairly in operation; and for the purpose of obtaining the views of different classes of citizens, respecting the management of an institution of such general utility, the trustees have determined to petition the legislature at their next session, to enlarge the board of trustees, and to form a board of visitors, composed of gentlemen of respectability, but residing principally at a distance; before whom the proceedings of the trustees may be brought at stated periods, and confirmed, modified or annulled as they may deem proper.

The trustees inform the public that the institution will go into operation early in January, under the auspices of the Rev. *Benjamin Hale*, recently a tutor in Bowdoin College, whom they have chosen Principal of the Lyceum, and Lecturer in Natural Philosophy; and that from his zeal, capacity and acquirements they feel assured, that the experiment (for such it must be yet considered) will be fairly tried.

The trustees conclude their address with expressing their confidence, that as they are engaged in an object calculated to meet the wants of a state, which possesses all the requisites for becoming great, and distinguished in agriculture, manufactures and commerce, that they shall not want the support and encouragement of the public. They are engaged in no private enterprise. They expect to profit no particular class of men; but to aid those, who form the bone and sinew, and muscle of the body politic. They aim at the public good, and they hope for the public patronage.

R. H. GARDINER, Per Order.

* * *

From the Memoirs of the Board of Agriculture of the State of New York.

OBSERVATIONS ON FATTENING CATTLE.

[*By a Gentleman of Columbia.*]

This subject offers to our consideration these points:—Can it be made a distinct branch of agriculture, with advantage to the farmer?—And what is the best and most profitable mode of attaining this object?

It is every where observed, that this business, on a small scale or the feeding of a few cattle, is more for convenience than gain. Every farmer wants, and, it is presumed, provides his family with a sufficiency of this necessary article, the cost or trouble of which he seldom or never counts; and most farmers have some cattle to dispose of in the course of the year—young stock that are supernumerary, some cows to turn off, and a yoke or two of old oxen. These must be disposed of at any rate.

Now we all know, that selling lean cattle, either in spring or fall, is a poor business at best, even when they can be sold at all; and the only way to obtain any thing like a fair price, is to get them ready for the butcher as early as possible. If they are in good pasture from the middle of May to the middle of August, they will sell, as there is generally a demand by those who retail them in the country villages and towns; poor enough to be sure is the meat, but it goes by the name of beef. To keep on hand this kind of stock for three months longer, that is, to the middle of November, when the markets are so fully supplied, they will seldom pay for their keeping. As an article of agricultural profit, it will never do; as a matter of convenience and necessity, we must make use of it If then, in a domestic way, this turns to so little profit, let us next examine whether, on a large scale, it can be made better. In the spring, lean cattle, as steers and oxen, may generally be purchased low, and in six months, being kept in good pasture all that time, they will be fat, or at least in good order. Now what have they cost? An ox, on the 15th of May, of moderate size, will cost, on an average, $25; keeping till the 15th of November, will not be less than $1 per month, that is, $6; expense of sending to market, 100 miles distant, $2 50; interest on the purchase money, including risk, at 10 per cent, is $2 50—then your ox has cost $36. He will not sell at that season for more than $40—a poor profit indeed of $4. This article will then seldom answer, unless where land is at a low price, and very distant from market. I have known several trials made, and by attentive experienced farmers, who have, after a year or two, given it up.

Let us next examine whether winter stall feeding will do better. If cattle are in very good order, or half fat, the 1st of December, they may be made fit for market in three months, and feeding for that time will cost $25. If they are in ordinary store order, it will require six months feeding, which will cost at least $30. Now it is easy to calculate whether the price you will then obtain for them will pay the first cost, risk, interest, and expenses; if so, stall feeding will do, otherwise not. My own experience has taught me that it will not do—others will judge for themselves.

These observations apply particularly to farmers at a distance from the city markets; those who are near have the advantage of waiting, and watching the rise and fall; not so with those at a distance. The inference from the observations made, lead to the conclusion, that stall feeding is not so profitable as is generally thought; yet some able and intelligent farmers pursue the practice. How they manage, it would be very desirable to know. We, who have been unsuccessful, would be enabled to correct our errors, and others would obtain information which they may otherwise search for in vain. When the farmer or grazier undertakes to make the fattening of cattle his business, the first prerequisite is, that he be a judge, and a good one too, of the worth of cattle in all their different stages, of which he judges by the eye and hand; next he must have at command a capital in cash, to enable him to buy with most advantage; and then he must have provided feed in sufficient quantity for whatever mode of feeding he undertakes. Fattening on grass, or in the stall, are the two modes of managing this business: on grass, the best way is to buy young cattle, particularly three or four year old steers, in the month of November; to keep them in the yard all winter, fed partly with straw and partly with hay, but so as to have them in good order in the spring; and these cattle should not be of the largest sizes, rather middling, such as will come to about six hundred weight the four quarters, when fattened. Such may generally be bought for $20 or $25. They must have good pasture for four months, for if that fails, the profit is gone. But as we cannot controul the seasons, in case a severe drought takes place, the only remedy is a little grain, or rather meal, given daily. Provided they are thus fed, they will be ready for sale by the middle of September, and generally at this time, cattle of the above size are in good demand; if kept later, the markets are glutted, and the price always lower.

The middle of September, such cattle, weighing 600 pounds the quarters, will not sell for more than $36, or $6 per hundred. They have cost, first $20, next winter keeping, hay $2 50, straw, $2 50, four and a half months grass, $4 50, interest for ten months on $20, at 7 per cent. $1 16,—then the profit is about $5,—besides the risk. This is no great encouragement, yet I can make no more of it, and have often made less.

In pursuing this subject, we now enquire, what is the most economical and profitable way of winter feeding? We must first know what an ox requires to fatten him, suppose he will give 800 pounds of beef. It has been already said that he may be made fat in three months, or one hundred days, if in good store order when put up. Let this time be allowed. He will eat, every twenty-four hours, 14 pounds of hay, cost 6 cents; half a bushel of potatoes, 12½ cents, and 8 quarts Indian meal, 12½ cent; being 31 cents a day, or $31 for the hundred days. This I have verified by many trials; and the interest $1 75, together making $32 75, which, added to the first cost, $25, then the ox has cost $57 75. If the beef is sold at $8 per cwt. in March, it leaves only $6 25, profit. There are several other articles of food on which cattle may be fatted; but the above is the most economical that I know. Oil cake is the quickest to fatten with, and where it can be had, it is advisable to use it instead of Indian meal; the price is about 56 cents per bushel, ground, and the quantity from 4 to 8 quarts per day.

To fatten an ox on turnips will require two bushels a day, with 10 lbs. of hay. Carrots answer well, but are more expensive still—cabbage the same. From all these we exempt premium cattle, and those made up for shew. Sure I am that the feeder never gets paid, unless he is gratified with seeing his oxen dressed up with ribbons, and his name in the papers. It was told me as a fact, that one gentleman from Orange county, who had just sold in New York ten very fine cattle, being asked how much profit he had made by these as they had been fed eighteen months, answered he had just made a loss of $30 a head, although they were sold at a high price. Where then go all the profits, for beef is still at a good price when cut up? The answer is, to the butcher, who realizes from 25 to 30 per cent. on good cattle. No wonder then that they make such ample fortunes, and that they wallow in wealth, while the poor industrious farmer plods along with very small gains indeed. I have only to add, that these observations are the result of experience, and not of idle speculation.

ON THE APPLICATION OF STABLE MANURES.

[*By J. Buel, of Albany.*]

The experiments of Arthur Young, and of other practical and scientific farmers, have demonstrated, that animal and vegetable manures, which undergo a complete process of fermentation in the cattle yard, or upon the surface of the ground, lose from 30 to 60 per cent. of their fertilizing properties; and if properly spread, and buried under the soil, that this loss is prevented—and that a decomposition does immediately take place, even of dry straw, sufficient to answer valuable purposes to the first crop. Mr. Young, whose correctness and practical knowledge will not be questioned by any one who knows his biography or his usefulness, measured five equal pieces of ground: upon the first piece he put nothing; on the second he buried dry straw, chopped fine; on the third, straw steeped three hours in fresh urine; on the fourth, straw steeped fifteen hours; and on the fifth, straw steeped three days in like manner. The whole was sowed with barley. The produce of each piece, in grain, and in weight of grain and straw, was as follows:—

	Grain	Wt. of grain and straw
No. 1,	9	48
2,	39	100
3,	50	120
4,	63	130
5,	126	300

This experiment demonstrates two important facts. 1st. that even dry straw, buried under the soil, decomposes, and greatly improves the first crop. 2d. that the urine of animals, which is ordinarily lost to our farmers, is the most fertilizing product of the stable and yard We have a strong corroboration of the latter, in the history of Flemish husbandry. Radcliff, in his report of the agriculture of Flanders, speaks of urine as constituting the most valuable part of the manure used in those highly cultivated provinces. He cites an instance, where the urine of 44 cattle, by the adventitious aid of rape-cake, and the *vidanges* from the privies, manured in the best manner 21 English acres per annum. The urine is collected in large cisterns under ground, into which drains lead from the stables, where the cattle are kept winter and summer. Although I do not expect to see this practice of the Flemings imitated by our farmers, yet I hope the narrative of the preceding fact will not be lost upon them. It shows the importance of constructing concave yards for our cattle, which will retain the urine and moisture, until it is absorbed by the straw, husks, stalks, and other vegetable litter of the yard.

It has become a pretty well settled principle among good farmers, that we should never delay applying manures, because it is unfermented or unrotted; but, on the contrary, that they are the most profitably applied before fermentation commences, or while it is an incipient state. The main object of this essay remains to be considered. To what crops shall we apply them?

The experience of almost every farmer will testify, that, except on very poor soils, they ought not to be applied, in any considerable quantity, to wheat, rye, barley, or any of the small grains. They often cause, in these, a too luxurious growth, and a greater product of straw than of grain. The straw is tender, subject to the rust and the mildew, and the grain is liable to blast—besides, the crop is apt to lodge and spoil, in consequence. Another serious injury is the propagation of weeds and grasses, the seeds of which are carried out in the manure, and which cannot be extirpated in the growing crop To apply manures upon the surface of grass lands, unless of a mineral kind, or in the form of a liquid, or impalpable powder, is throwing away one half of their value. And peas and flax do not do well under their first operation. Arthur Young's rule, and it is a good one, is, always to apply your manure to hoeing crops.

These are Indian corn, potatoes, beans, and the whole family of vegetables. These can bear, and they want, all the gasses which are evolved in the first process of fermentation. The gasses open the texture of the soil, and render it pervious to heat, air, and light, and impart food to the young plants; and the hoeing process exterminates all useless plants and renders the ground clean and loose. When applied to the maize crop, the manure should be spread before the last ploughing. The roots of this grain are numerous, extend to a great length, and elongate most where there is nutriment and tilth to invite. Placed in the hill, the manure gives a temporary impulse to the growth of the plant, and fails in its benefits when most wanted to the maturing seed. It answers also best, when spread, for the succeeding crop, which is always some small grain. These reasons all hold good in regard to spreading manure for the bean crop, whether that is cultivated in hills, drills, or the broadcast method. For potatoes, whose roots do not extend far, the manure is most serviceable, when applied to the hills, or drills. For ruta baga, mangel wurtzel, cabbage or turnips, its benefits are multiplied when it is placed under the ridges upon which these crops are planted. It renders the recumbent soil light and friable, attracts moisture, and yields an abundance of food where it is alone wanted for the growing crop.

Either of these crops, if manured, leave the ground in good tilth, and free from weeds, and may be followed with advantage by wheat, rye, barley or oats, according to the quality of the soil. The manure, applied in the spring, gives most of the benefits to the small grain crop which it would have done, had it been left to ferment in the yard; and then applied to that in the first instance.

ON THE PRESERVATION OF CABBAGE.

[*By Bela Fosgate, of Cayuga.*]

If the raising of vegetables is an object to the farmer, their preservation will be found no less so. I am convinced, from a partial experiment, that the following mode of keeping cabbage will be found useful. After they are gathered, and freed from their loose leaves and stalks, that nothing remains but the sound part of the head, head them up in a tight cask. By thus excluding them from the air, they may be kept for a long time. Those intended for the longest keeping should be put into small casks, as they will soon spoil when exposed to the air.

MAN-TRAINING—DESCRIBED.

As most of our readers have seen accounts of the extraordinary performances of Pugilists and Pedestrians in England, they may be entertained with a description of the previous *training*, which is practised, to qualify a man to fight for an hour with unabating courage, and exertion, or to walk one hundred miles in twenty-four hours—we have therefore extracted from "Sporting Anecdotes," an account of the process recommended and pursued by the famous Capt. Barclay, one of the most extraordinary of modern actors in this line of performance. One would suppose that whatever mode of living would augment the elasticity and power of the mind and body, would, of-course, ensure to both, the soundest state of health—we accordingly recommend the trial of the training process to all our gouty, rheumatic, bilious, dyspeptic and hypocondraic friends. It must be acknowledged that the sweating part of the business is rather severe. To run four miles, at the top of one's speed, take the hot drink, put on flannels, and then lie down in the month of August under eight blankets and a feather bed!! one might as well be doomed to walk on *un*-boiled peas—yet it seems this *is done* to diminish the volume and increase the activity of the human frame.

Edit. Am. Farmer.

The most effectual process for training, is that practised by Captain Barclay; and the particular mode which he has adopted has not only been sanctioned by professional men, but has met with the unqualified approbation of amateurs. The following statement, therefore, contains the most approved rules; and it is presented to the reader, as the result of much experience, founded on the theoretic principles of the art.

The pedestrian, who may be supposed in tolerable condition, enters upon his training with a regular course of physic, which consists of three doses. Glauber's salts are generally preferred; and from one ounce and a half to two ounces are taken each time, with an interval of four days between each dose.* After having gone through the course of physic, he commences regular exercise, which is gradually increased as he proceeds in the training. When the object in view is the accomplishment of a pedestrian match, his regular exercise may be from 24 miles a day.—He must rise at five in the morning, run half a mile at the top of his speed up hill, and then walk six miles at a moderate pace, coming in about seven to breakfast, which should consist of beef-stakes or mutton-chops under-done, with stale bread and old beer. After breakfast, he must again walk six miles at a moderate pace; and at twelve lie down in bed without his clothes for half an hour. On getting up, he must walk four miles, and return by four to dinner, which should also be beef-stakes or mutton-chops, with bread and beer as at breakfast. Immediately after dinner, he must resume his exercise by running half a mile at the top of his speed, and walking six miles at a moderate pace. He takes no more exercise for that day, but retires to bed about eight, and next morning proceeds in the same manner. After having gone on in this regular course for three or four weeks, the pedestrian must take a four mile sweat, which is produced by running four miles in flannel, at the top of his speed. Immediately on returning, a hot liquor is prescribed, in order to promote the perspiration, of which he must drink one English pint.—It is termed sweating liquor, an is composed of the following ingredients: viz. one ounce of caraway seed, half an ounce of coriander seed, one ounce of root liquorice, and half an ounce of sugar candy, mixed with two bottles of cyder, and boiled down to one half. He is then put to bed in his flannels, and being covered with six or eight pair of blankets, and a feather bed, must remain in this state from twenty five to thirty minutes; when he is to be taken out and rubbed perfectly dry. Being then well wrapped up in a great coat he walks out gently for two miles to breakfast, which on such occasions, should consist of a roasted fowl. He afterwards proceeds with his usual exercise. These sweats are continued weekly, till within a few days of the performance of the match, or, in other words he must undergo three or four of these operations. If the stomach of the pedestrian be foul, an emetic or two must be given, about a week before the conclusion of the training, and he is now supposed to be in the highest condition. Besides his usual or regular exercise, a person under training ought to employ himself in the intervals in every kind of exertion which tends to activity. such as cricket, bowls, throwing quoits, &c. that during the whole day, both body and mind may be constantly occupied.

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* *It is not so generally known as it ought to be, that a salt, introduced into medical practice by Dr. George Pearson, of London, is as excellent a purge as Glauber's salt, and has none of the nauseous taste which renders that purge so disagreeable to many persons. The* phosphate of soda, *is very similar to common salt in taste, and may be given in a bason of gruel or broth, in which it will be scarcely perceptible to the palate, and will also agree with the most delicate stomach.*

The diet or regimen is the next point of consideration, and it is very simple. As the intention of the trainer is to preserve the strength of the pedestrian, he must take care to keep him in good condition by nourishing food. Animal diet is alone prescribed, and beef, and mutton are preferred. The lean of fat beef, cooked in stakes, with very little salt is the best, and it should be rather under-done than otherwise.—Mutton being reckoned easy of digestion, may be occasionally given, to vary the diet and gratify the taste. The legs of fowls are highly esteemed. It is preferable to have the meat BROILED, as much of its nutritive quality is lost by *roasting* or *boiling* * Biscuit and stale bread are the only preparation of vegetable matter which are permitted to be given; and every thing inducing *flatulency* must be carefully avoided. Veal and lamb are never allowed, nor pork, which operates as a laxative on some people; and all fat or greasy substances are prohibited, as they induce bile, and consequently injure the stomach. But it has been proved by experience that the lean meat contains more nourishment than the fat, and in every case the most substantial food is preferable to any other kind.

Vegetables, such as turnips, carrots, or potatoes, are never given, as they are watery and of difficult digestion. On the same principle fish must be avoided, and, besides, they are not sufficiently nutricious. Neither butter nor cheese is allowed; the one being very indigestible, and the other apt to turn rancid on the stomach.—Eggs are also forbidden, excepting the yolk, taken raw in the morning. And it must be remarked, that salt, spices, and all kinds of seasonings, with the exception of vinegar, are prohibited.

With respect to liquors, they must always be taken cold; and home brewed beer, old, but not bottled, is the best. A little red wine, however, may be given to those who are fond of malt liquor, but never more than half a pint after dinner. Too much liquor swells the abdomen, and of course injures the breath. The quantity of beer, therefore, should not exceed three pints during the whole day, and it must be taken with breakfast and dinner, no supper being allowed. Water is never given alone, and ardent spirits are strictly prohibited, however diluted It is an established rule to avoid liquids as much as possible, and no more liquor of any kind is allowed to be taken than what is merely requisite to quench the thirst. Milk is never allowed, as it curdles on the stomach. Soups are not used;* nor is any thing liquid taken warm but gruel or broth, to promote the operation of the physic; and the sweating liquor mentioned above. The broth must be cooled, in order to take off the fat, when it may be again warmed; or beef-tea may be used in the same manner, with little or no salt. In the days between the purges, the pedestrian must be fed as usual, strictly adhering to the nourishing diet, by which he is invigorated.

Profuse sweating is resorted to as an expedient for removing the superfluities of flesh and fat.—Three or four sweats are generally requisite, and they may be considered the severest part of the process.

Emetics are only prescribed if the stomach be disordered, which may sometimes happen, when due care is not taken to proportion the quantity of food to the digestive powers; but, in general, the quantity of aliment is not limited by the trainer, but left entirely to the discretion of the pedestrian, whose appetite would regulate him in this respect. Although the chief parts of the training system depend upon sweating, exercise and feeding, yet the object to be obtained by the pedestrian would be defeated, if they were not adjusted each to the other, and to his constitution. The skilful trainer will, therefore, constantly study the progress of his art, by observing the effects of the process separately, and in combination.

If a man retain his health and spirits during the process, improve in wind, and increase in strength, it is certain that the object intended will be obtained. But, if otherwise, it is to be apprehended that some defect exists, through the unskilfulness or mismanagement of the trainer, which ought instantly to be remedied by such alterations as the circumstances of the case may demand. It is evident, therefore, that, in many instances, the trainer must be guided by his judgment, and that no fixed rules of management can, with absolute certainty, be depended upon for producing an invariable and determinate result.

It is farther necessary to remark, that the trainer, before he proceeds to apply his theory, should make himself acquainted with the constitution and habits of his patient, that he may be able to judge how far he can, with safety, carry the different parts of the process. The nature of his disposition should also be known, that every cause of irritation may be avoided; for, as it requires great patience and perseverance to undergo training, every expedient to soothe and encourage the mind should be adopted.

It is impossible to fix a precise period for the completion of the training process, as it depends upon the condition of the pedestrian; but from two to three months, in most cases, will be sufficient, especially if he be in tolerable condition at the commencement, and possessed of sufficient perseverance and courage to submit cheerfully to the privations and hardships to which he must unavoidedly be subjected.

Training is indispensably necessary to those who are to engage in corporeal exertions beyond their ordinary powers. Pedestrians, therefore who are matched either against others or against time, and pugilists who engage to fight, must undergo the training process before they contend, as the issue of the contest, if their powers be nearly equal, will, in a great measure, depend upon their relative condition. But the advantages of the training system are not confined to pedestrians and pugilists alone, they extend to every man; and were training generally introduced, instead of medicines, as an expedient for the prevention and cure of diseases, its beneficial consequences would promote his happiness and prolong his life.

It is well known to physiologists, that both the solids and fluids which compose the human frame are successively absorbed and deposited; hence, a perpetual renovation of the part ensues, regulated, as they are, by the nature of our food and general habits.* It, therefore, follows, that our health, vigour, and activity must depend upon regimen and exercise; or, in other words, upon the observance of those rules which constitute the theory of the training process. The effect has accordingly corresponded with the cause in all instances where training has been adopted; and although not commonly resorted to as the means of restoring invalids to health, yet there is every reason to believe that it would prove effectual in curing many obstinate diseases, such as the gout, rheumatism, bilious complaint &c.

"Training (says Mr. Jackson) always appears to improve the state of the lungs; one of the most striking effects is to improve the wind, that is, it enables a man to draw a larger inspiration, and to hold his breath longer." He farther observes, "By training, the mental faculties are also improved." The attention is more ready, and the perception more acute, probably owing to the clearness of the stomach and better digestion.†

It has been made a question whether training produces a lasting or only temporary effect on the constitution. It is undeniable, that if a man be brought to a better condition, if corpulency and the impurities of his body disappear, and if his wind and strength be improved by any process whatever, his good state of health will continue, until some derangement of his frame shall take place from accidental or natural causes.—If he shall relapse into intemperance, or neglect the means of preserving his health, either by omitting to take the necessary exercise, or by indulging in debilitating propensities, he must expect such encroachments to be made on his constitution as must soon unhinge his system.—But if he shall observe a different plan, the beneficial effects of the training process will remain until the gradual decay of his natural functions shall, in mature old age, intimate the approach of his dissolution.

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* "*It may serve as a preliminary rule, that fresh meat is the most wholesome and nourishing. To preserve these qualities, however, it ought to be dressed so as to remain tender and juicy; for it is by this means it will be easily digested, and afford most nourishment.*"—Willich on Diet and Regimen, p. 313.

* "*Broths and soups require little digestion, weaken the stomach, and are attended by all the pernicious effects of other warm and relaxing drink.*—Willich on Diet, &c. p. 304.

* *Bell's Anatomy, vol. i. p.* 12.

† *Code of Health, vol. ii. p.* 103.

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TO THE EDITOR OF THE AMERICAN FARMER.

THE CULTIVATION OF RICE AND THE RECLAMATION OF MARSH LANDS IN MARYLAND.

Cambridge, (Md.) September 23, 1823.

DEAR SIR,

I received your favor, enclosing some rice from Gov. Clinton, and have committed it to the care and culture of the gentlemen from the Carolinas, who have been reclaiming marshes on the Nanticoke, chiefly, though not wholly, with a view to the culture of that article; and in return I send you a specimen of the kind which they have grown, and are now growing, on those reclaimed grounds, though yet on a very small scale, and designed for experiment alone: this seed they brought from South Carolina; it is, in appearance, far superior to Gov. Clinton's, and twice the size, but may not be as well adapted to the climate of Maryland, as that which may have been acclimated, by its Northern growth: of which, from the strong evidence, exhibited by those gentlemen of intelligence and enterprize, we shall be faithfully informed, in the course of another season.

You desire to know the particulars of this undertaking, to reclaim marsh, and grow rice in Dorchester, and the probability of success:—On this subject I have often conversed with the gentlemen, and have recently received a communication from one of them; they are quite sanguine in the success of their undertaking; but having made but little progress, their impressions are derived, chiefly from a comparison of the grounds, they are attempting, with those on which similar attempts have been, under their own management, crowned with success: this remark, necessarily, has only a geological reference; in this respect, they inform me, they have a decided advantage over the Carolinas; their Dorchester soil is a black rich loam several feet in depth; in fact, it is a congeries of the carbonaceous remains of animal and vegetable decomposition, mixed with the products of the more recent stages of the process, and a good proportion of sand and clay, to place it in the *first order of soils, when dried.*

As to the drying and draining of this soil, no doubt can remain; the tides ebb and flow from three and a half to four feet, (ordinary tides,) and as they can drain to low water mark, they can, necessarily, keep the lands dry, at least two and a half feet deep; and, consequently, can grow any article which the climate will admit of: indeed they say, "they are most advantageously situated, as to water, and all other requisites to make them safe and sure, and not as liable to the influence of equinoctional gales, and sudden inundations from the overflowing of the tides, as those of the Carolinas."

In regard to the only remainng question of climate in the state of Maryland, to grow rice; very little, if any, doubt can remain; both reason and facts concur to settle the point; we have more than five months of a fine vegetative season, and a majority of the time warm; and to grow rice, requires only five months, "fully to mature the grain." Moreover, we have instances of successful experiment; I am informed by Robert Dennis, Esq. of Vienna, a gentleman of the most unquestionable veracity, that his father owned an African, who used to raise as much rice, annually, as served the family, in Worcester county: an old negro in my family who formerly belonged to John Leeds, Esq. a most respectable and intelligent farmer of Talbot, says that her master frequently raised rice: the Domestic Encyclopedia records "that Mr. Bordley raised rice, many years since, near Annapolis; and also in Talbot county." Finally, the gentlemen from Carolina, have, though on a small scale, tested the fact, "perfectly to their satisfaction," and express themselves as "certain of success."

But even admitting the failure of *rice*, to grow with sufficient certainty and abundance, to authorise its culture; what an infinite boon of providence have we, for ages spurned and neglected, in those rich fountains of wealth; the whole range of vegetable nature, for luxury and profit, which our climate will afford, may be most brilliantly substituted on these marshes, for worthless reeds and bushes; so fully convinced have I been of this, that I have reclaimed sixty acres of a deep morass on the Transquakin, which has now become sufficiently dry and firm to be ploughed, and will yield me, no doubt, in corn, wheat and grass, a handsome return for the trouble and expense incurred to reclaim it.

In addition to the small quantity of rice, which the gentlemen from Carolina are growing, for further experiment, and which they inform me is very flourishing, they have raised on their reclaimed grounds, the present year, a small crop of oats, which yielded largely; and they have "a small crop of cotton growing prettily, and bearing well," also "some corn which looks well," and "pumpkins which are fine."

In respect to the price of those lands, and cost of reclaiming, the gentlemen cannot, yet, render an accurate account; the maximum price paid by the acre, was fifty cents; some were bought in large unknown quantities, for much less; and the State granted them permission to take up, free of composition money, three thousand acres, which cost them, only the expenses of location.

The cost of reclaiming, may be estimated (they say) by the following data: sct. six hundred cubic feet of earth can be thrown out, by one laborer, with ease, in one day; and if the margin of the bank be no more than ten feet from the ditch, he will at once, make the bank; but, if the bank be made further from the ditch, the laborer is under the necessity of *removing* the mud, which will consume as much more time, as the first operation, and consequently cost double the price: their ditches on the river side of the marsh are fifteen feet from the river; and their banks ten feet from the ditch: these river-banks are eight feet base, and six feet high: those on the high-land side of the marsh and the interior banks, which subdivide their grounds into twenty acre lots, are smaller.

With a confidence that you will excuse a hasty and imperfect compliance with your request,

I am,
Your's respectfully,
JOSEPH E. MUSE.

EXTRACTS FROM LATE NUMBERS OF THE

London Farmer's Journal.

HEREFORDS AND SHORT-HORNS.

Park Farm, Woburn, June 11, 1823.

SIR,

Although not in the practice of writing for public inspection, perhaps you will give the following a place in your Journal.

I have for some time past seen in your paper much said respecting the superior qualities of both the Short Horn or Durham, and Hereford breeds of cattle, without any thing conclusive to prove the great advantages arising from the one, more than the other, either to the breeder or grazier; and it does not appear that any fair comparative trial has been made, although several challenges have been given by individuals who happened to have something at the time out of the common way: so much, however, depends upon the treatment each animal has had previously, the state of flesh when put to feed, the difference of quality of grazing land, and likewise the food given when stall-fed, that unless the animals are put together at an early age, and kept together under proper restrictions, as was done by his Grace the Duke of Bedford and Lord Althorp, it will be impossible to gain any real information upon the subject by challenging one another about producing the fattest cow, &c.

His Grace the Duke of Bedford and Lord Althorp entered into an agreement, and put together on the first day of November 1820, the former a Hereford, the latter a Short horn of the Durham breed, both steers, calved in the month of January 1820, and fed together until the great market at Smithfield, 1822, where they were shown alive, and afterwards slaughtered; when the judges, after taking all the merits, &c. of each into consideration, with the quantity of food consumed, give it as their opinion, that it was an undecided bet. While the above two steers were upon trial, his Grace the Duke of Bedford, and the Righ Hon. Charles Arbuthnot, were of opinion that one animal of each breed could not be a satisfactory trial, and being anxious to prove the advantage the one breed has over the other, if any, they entered into an agreement of the same kind upon a larger scale, which is now going on; a copy of it I have, by permission of the parties, given you annexed, to lay before the public, and I hope it may prove an inducement to some of our most meritorious breeders to follow the example of such characters as the above, whose principal object in making the experiment is to obtain such information as will in all probability be of great service both to the breeders and graziers in general, and may eventually be the means of doing away with the prejudice that seems at present to exist on both sides.

I am, Sir,
Your obd't servant,
THOMAS TODD.

COPY.

Terms of agreement for a trial between his Grace the Duke of Bedford, and the Right Hon. Charles Arbuthnot.

The Duke of Bedford on one part to produce four ox-calves of the Hereford breed on the 1st of November, 1822, all of which shall have been calved subsequently to the 15th November, 1821.*

Mr. Arbuthnot on his part, to produce four of the Short-horned or Durham breed, with the like restrictions.

Two of each breed to be kept upon the Duke of Bedford's farm, and two of each ditto upon Mr. Arbuthnot's farm.

All the calves to be from bulls which have been used by the parties, and from cows which, on the 15th Nov., 1821, were in their possession.—None of the calves to have milk after five months old. The parties, until the period of sending their respective steers to be put together, to be allowed to give them hay, or chaff, and roots, and green food of all descriptions; but to be restricted from giving them any sort of corn or flour, or artificial food under any denomination.

The steers of the two parties to be kept at the respective places upon food of similar quality, with the addition of cake, or meal, during the last year of feeding, if required by the parties, until the Christmas market day of December, 1824, and then to be shown together at Smithfield, in order to have it ascertained which of the breeds is the most profitable to the breeder and grazier.

Each of the parties to name a judge, and the third judge to be chosen by casting of lots between the parties, in order to guard as much as possible against partiality or favour; the drawing of lots for the choice of the third judge to take place for each of the four lots of steers.

Upon the requisition of any one of the judges, one or more of the beasts to be slaughtered, in order that the real value may be accurately ascertained; but this to take place only in the event of there being a difference of opinion as to the value among the judges.

A regular and detailed account to be kept of the quantity and quality of food consumed by each of the eight animals, during the time that they are stall-fed.

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* *Some variation as to the proposed period of calving took place subsequently to this agreement being drawn up.*

The accounts thus kept to be delivered to the judges previously to their giving their decisions, and the judges to be directed to take into their consideration the extra quantity of grass which may be supposed to have been consumed during the months of pasture, by such of the animals as may have required more food than the others while they were stall-fed.

The day when each of the eight animals was calved to be written on a label, and to be fixed to their horns respectively at the time that they shall be shown to the judges for their decision.

A copy of the terms of agreement to be given to the judges.

From Griscom's "Year in Europe."

BARCLAY'S BREWERY.

The director of this establishment, to whom I was introduced by a letter from one of the Barclays, put me in the way of seeing its various parts, and communicated such information as I wished respecting its extent and operations. If any private concern in England, or in the world, is entitled to the epithet of *vastness*, this is one. It covers about eight acres of ground, and manufactured last year 340,000 barrels of 36 gallons each. The building which contains the vats, and the vats themselves, are enormous. The largest of the latter contain each 4000 barrels. The average number of vats is nearly one hundred. A steam engine of twenty-two horse power is employed in driving the machinery, and about two hundred men are engaged in the various works of the establishment: while it is supposed that the number of persons, dependent upon it without, in the sale and transportation of the beer, is three or four thousand. The three coppers in which the beer is boiled, hold each 150 barrels.

Twenty-five gentlemen once dined in one of them, after which fifty of the workmen got in and regaled themselves. One hundred and ninety pounds of beef steaks, were thus consumed in one day, in this novel kind of dining room. The tuns in which the beer ferments, hold 1400 barrels each. The carbonic acid in one of them stood about three and a half feet above the liquor, and poured over the side in a continued stream. A candle is instantly extinguished on being placed near the outer edge of this receptacle, and on holding one's face near it, a sharp pungent sensation is felt in the mouth and fauces, not unlike that produced by ardent spirits. An immersion of a few moments would be sufficient to occasion a suspension of voluntary motion.

One hundred and sixty horses are kept on the premises, for the purpose chiefly of transporting the materials to and from different parts of the city. A finer collection of animals employed in one concern, I imagine, is no where to be seen.

This is, upon the whole, I believe, the largest brewery in London. It formerly belonged to Thrale, the friend of Dr. Johnson, who, as executor to the estate, sold the establishment to its present owners. One of the latter informed a friend of mine, that the Doctor, in treating with them for the purchase, remarked in his characteristic manner: "Gentlemen, it is not merely these boilers and these vats that I am selling you, but the potentiality of acquiring wealth, beyond the dreams of avarice."

TO THE EDITOR OF THE AMERICAN FARMER.

ON SHEEP.

Washington, (Pa.) Sept. 20, 1823.

SIR,

The pages of your valuable paper, are seldom more usefully occupied, than with the production of the pen of Mr. Featherstonhaugh—they are well calculated both to entertain and instruct. Few gentlemen in our country, possess the practical and scientific agricultural knowledge that he does. And although I subscribe most heartily to most of his opinions, I cannot believe that his plan of raising a stock of sheep, is equal to the one generally practised in this part of Pennsylvania. We have now very numerous flocks of good sized, well formed sheep, by serving the large common ewes of our country, with full blooded Merino rams. It is somewhat singular, but it is a fact, that half or three quarter blooded Merinos yield heavier fleeces than either the pure Merinos, or the common coarse kind. I am certain that I am under the mark, when I state that my two-year old wethers at this moment, would average from eighteen to twenty pounds per quarter—their fleeces run from five to eight pounds.—I consider them a hardier sheep than the unmixed of either side—they certainly combine the two great objects which every sheep raiser ought to keep steadily in view; I mean heavy carcase and valuable fleece—I must here remark, that in this section of country, we have had weight and fineness of fleece solely in view. Had we attended to size, we might have attained that object in a much greater degree.

Mr. Featherstonhaugh's plan of large males and small females, is in direct opposition to the principle laid down by Cline, for breeding perfect formed animals—these principles, I believe incontrovertible. I have no doubt that Mr. F. has raised a very fine stock of sheep, as perseverance will accomplish almost any thing. I still am satisfied that had he commenced with a selected flock of healthy, good sized common ewes, and first rate Merino bucks—with his great skill and care, he would now have owned a very superior flock. I will just add that I have lost all my ambition for raising great overgrown stock of any kind—experience has convinced me, that moderate sized, compactly built, suitably proportioned animals are the most profitable for the farmer.

I am, very sincerely,
Your's, &c.
A. R.

FALL RACES.

IN VIRGINIA—*at Belfield*—8th day of October—1st day for 3 year olds; a sweepstake, 2 mile heats for $200.

2d. day—Jockey Club, 3 mile heats, for from 3 to $400.

3d day—Proprietor's purse for $200—2 mile heats, free for any horse except the winner of jockey club.

At NEW MARKET, 13th of October.

1st day—Sweepstakes for three year olds, 2 mile heats, entrance $500, half forfeit, 3 subscribers and closed.

2d day—Proprietor's purse $300, 3 mile heats.

3d day—Jockey Club, $600, four mile heats.

4th day—Handy Cap, $100, 2 mile heats.

WARRENTON, 28th October.

1st day—Sweepstakes one mile heats for for 3 year olds, $100 entrance—3 or more make a race.

2d day—Jockey Club purse $300, 3 mile heats.

3d day—Proprietor's purse 2 mile heats, $200.

4th day—Handy Cap.

LAWRENCEVILLE RACES, Wednesday, the 1st of October.

1st day—Sweepstakes 2 mile heats, for $200.

2d day—Jockey Club purse worth about $500, four mile heats.

3d day—Proprietor's purse $200, 2 mile heats, same evening a *mule race*.

BOYDTOWN RACES, 5th November.

1st day—Sweepstakes for 3 year old colts and fillies—entrance $200, 2 mile heats; subscription to close the evening preceding the race.

2d day—Proprietor's purse, $200.

3d day—Jockey Club purse, $500, 4 mile heats.

4th day—A Handy Cap purse, —— mile heats.

MARYLAND ASSOCIATION FOR THE IMPROVEMENT OF THE BREED OF HORSES.

At a meeting of this Association, held agreeably to notice, at Barnum's hotel, on Friday the 22d August, 1823,

GEN. WM. H. WINDER, *Chairman.*
E. L. FINLEY, *Secretary.*

The Association was organised for five years, to commence from the 7th of August, 1823, and rules and regulations were adopted for the government of the association. The following gentlemen were then unanimously elected officers of the association.

President, Thomas Tenant.

Vice-Presidents, Edward Lloyd, Samuel Sprigg, Frisby Tilghman, Joseph Gales, William H. Winder.

Treasurer, B. I. Cohen.

Secretary, E. L. Finley.

Managers, John S. Skinner, James L. Hawkins, W G. D. Worthington, John Thomas, James Howard, Jacob G. Davies, Thomas Kell, William Frick, James Clark, John McPherson of Frederick, B. D. Mullikin, Charles Worthington, of William.

Committee of Elections, U. S. Heath, John Merryman, John Glenn, Charles Tiernan, S. C. Leakin.

It was resolved that the first Annual Races of the Association, should take place at the Canton course near Baltimore, on the 22d of October, 1823, for the following purses,—free for any Horse, Mare, or Gelding, to carry weight, &c. agreeably to the rules of this Association.

1st Day. Two mile Heats for a purse of $250
2d Day. Three mile Heats for a purse of $500
3d Day. Four mile Heats for a purse of $1000

The winning horse of each day to be excluded from running for any of the other purses during that meeting.

WM. H. WINDER, *Chairman,*
E. L. FINLEY, *Secretary.*

FOR THE AMERICAN FARMER.

MARYLAND CATTLE SHOW AND FAIR,

No. 4.

The Board of Trustees elected under the new organization of the Maryland Agricultural Society, held their first meeting at Hampton, on Wednesday the 24th September, in pursuance of an invitation from General Ridgely, the President of the Board: and then and there proceeded to make arrangements for the next Cattle Show and Fair, to be held at the Maryland tavern, on Wednesday the 5th of November next.

Extract from the Minutes.

COMMITTEES APPOINTED TO AWARD THE PREMIUMS OFFERED BY THE SOCIETY.

ON HORSES.

Henry Thompson,
Christopher Carnan,
Nich. Goldsborough,
Frisby Tilghman,
William Riggin.

ON MULES AND ASSES.

Col. Thomas Emory,
L. B. Duvall,
C. S. Ridgely,
Dr. G. W. Thomas,
Gen. S. Ringgold.

HOGS.

Com. Isaac Chauncey,
Samoel Owings,
Robert Wright,
Nicholas Martin,
John Yellott, Jr.
Grafton Duvall.

SHEEP.

Virgil Maxcy,
James Gittings,
R. W. Bowie,
W. R. Stuart,
J. Sykes.

CATTLE.

R. H. Goldsborough,
N. M. Bosley,
William Potter,
P. Wethered,
David Williamson, Jr.

BUTTER.

Gen. T. M. Forman,
R. Gilmor,
G. McKubin,
Joseph Gales, Jr:
P. E. Thomas.
Jonathan Meredith.

AGRICULTURAL MACHINERY.

Gen. John Mason,
Dr. S. McCulloh,
Tench Tilghman,
G. E. Mitchell,
Roger Brook.

PLOUGHING.

H. V. Somerville,
J. W. McCulloh,
John Marsh,
J. L. Webster.
T. Tongue.
B. F. Mackall.

HOUSEHOULD MANUFACTURES.

Thomas Ellicott,
Thomas Culbreth,
T. H. Wilkinson
Edward Lloyd,
Charles Goldsborough.

CROPS.

Nicholas Hammond
B. W. Hall,
Joseph Blake,
Robert Sinclair,
Daniel Martin,
Samuel Hardin.

FERMENTED LIQUORS.

John McLean,
Stevenson Archer,
William Gibson,
Joseph Kent,
Ely Balderston,
Daniel Murray.

COMMITTEE OF ADMISSION.

James Cox,
W. F. Redding,
Philip Tyson,
Elisha Tyson, Jr.
Evan Poultney,
John Wm. Thompson,
James Piper,
W. E. Cole,
John Schwartz,
John Hewes.

MARSHALLS.

Dr. A. Thomas,
George Howard,
Lloyd N. Rogers,
S. Smith, Jr.
R. Riddell,
A. Sterling,
W. F. Johnson,
Theodore Anderson,
Benjamin I. Cohen,
John Beckett,
D. R. Guest,
Henry Carroll,

James Carroll, Jr. J. W. McCulloh, and J. S. Skinner, were appointed a committee to prepare and publish rules and regulations for the government of the exhibition, and R. Gilmor, James Cox and H. V. Somerville Esqrs. were appointed a com mittee to prepare and cause to be engraved the design and form of a certificate, to be issued with each premium, under the seal of the Society, and the signature of the President.

The Secretary was instructed in behalf of the Trustees, to request Gen. R. G. Harper, to deliver an address on the affairs of the Society, and the subject of Agriculture, [to which Gen. H. has politely assented.]

The Trustees then adjourned to hold their next meeting, at the residence of Col. Nicholas M. Bosley, on the York Turnpike road, on Wednesday the 15th of October.

JAMES HOWARD,
Secretary.

It will be recollected that in June last, the con stitution of the Society was remodelled, and in lieu of a committee of Arrangement, A PERMANENT BOARD OF TWELVE TRUSTEES, was provided for each Shore. This was done in imitation of a similar feature in the constitution of that eminent and excellent institution, the Agricultural Society of Massachusetts.

These twelve trustees have been duly elected for the Western Shore, with the understanding that, as in Massachusetts, they are to meet at each others houses, in rotation, at an early hour, on a given day in *each month.* When convened, the affairs of the Society are to be in the first instance, the exclusive subject of attention and business. That being finished, the conversation naturally turns on the prospects and interests, the practice and the science of Agriculture generally. It is understood that the entertainment on these occasions is to be plain and substantial, without ostentation or extravagance; and that every one is at liberty and expected to bring with him for exhibition, specimens of any thing very remarkable, such as beautiful samples of any kind of grain, or grass, tobacco, or extraordinary melons, fruits, &c. &c.

Before rising from the table, the host is expected to designate the gentleman at whose house the trustees will dine, on that day four weeks.

It will be readily seen how well this system of monthly meetings in the country, is calculated to keep alive the zeal for agricultural improvement. The intervals are so short that it has not time to languish, and we venture to say that were the same system adopted wherever agricultural societies are established, we should see them go on as that in Massachusetts has done; increasing from year to year, in publick spirit and usefulness—constantly augmenting its resources, multiplying the objects of its patronage, and extending the sphere of its influence.

We regret exceedingly to hear that no steps have been taken by our friends on the Eastern Shore of Maryland, towards another exhibition at Easton How different this result, from what was indicated by their first attempt last fall! We venture to assert that no association to promote improvements in husbandry, ever commenced more happily than they did.—For the first essay, it was whether in the animals and household manufactures exhibited, in the solid character and gentlemanly deportment of the farmers attending, or in the whole style and conduct of the exhibition, to say the *least*, certainly not inferior to any ever held in the United States. We cannot, we will not believe, that where means are so abundant, intelligence so ample, and advantages so obvious, they will allow an association to be dissolved, whose services are so well calculated to ensure to a profession, by which their sons are destined to live, that degree of pleasure and *respectability*, which it has not always enjoyed, but to which it is so justly entitled.—*Edit. Am. Far.*

☞ The Editors of all the papers in the State of Maryland and District of Columbia, are respectfully requested to copy the foregoing proceedings and remarks.

* * *

FOR THE AMERICAN FARMER.

PERFORMANCE OF POSTBOY.

Postboy was foalded in 1800, sire, the imported Gabriel; Dam, by Hyder Ally.

On the 12th of October 1803, for the Baltimore Jockey Club's colt's purse of $150, Postboy carrying a feather, beat Rosebud, by Grey Medley, 97 lb; Vulcan, by Paul Jones; and Eleanor by Gabriel, each a feather, two mile heats.

In October 1804 he won the Baltimore Jockey Club's colt's purse for $200, beating Mr. Lloyd's Goldfinder, two mile heats.

The same fall he won the colt's purse at Annapolis, of $200 beating Oscar by Gabriel, and a grey colt, two mile heats.

The same fall he beat Col. Selden's Sting, at Washington, a match race for $1000 a side, two mile heats.

The next day, at the same place, he won a silver cup, value 50 guineas, beating Col. Tayloe's Hambletonian; Mr. Lloyd's Rapid; Col. Selden's grey horse, and Mr. Duckett's Republican President, distancing the field, except Rapid, who barely saved his distance; a single four mile heat.

In the spring of 1805, he won $200 at Canton, beating Mr. Duckett's Financier, three mile heats.

In October 1805, he won the silver cup, value 50 guineas, at Washington, beating Col. Tayloe's Hambletonian and Mr. Lloyd's Mount Vernon, a single four mile heat.

In the spring of 1806, he walked over for $300 at Canton.

On the 29th of October 1806, for the Washington Jockey Club's second day's purse of $500, carrying 120 lb., he beat Miller's Damsel, by Messenger, 97 lb; Sally Nailor, by Spread Eagle 117 lb; Cut-and-come-again, by Cormorant, 123 lb; and Paragon, by Spread Eagle, 112 lbs. three mile heats.

The following week he won $250 at Lancaster, beating Mr. Bond's famous First Consul, and Mr. Lloyd's Lavinia, three mile heats.

In October 1807, for the Washington Jockey Club's first day's purse of $600, he beat Major Beam's Maria by Punch, four mile heats.

The next week he walked over for the Alexandria Jockey Club's first day's purse of $500.

On the 10th of May, 1808, for a subscription purse of $1000 at Hunting Park, near Philadelphia, he beat Mr. Badger's famous Hicory, by whip, 4 years old, and distanced Mr. Bond's Bright Phœbus, by Messenger, same age, four mile heats.

RECAPITULATION.

Baltimore Jockey Club's colt's purse	$150 00
do. do. do.	200 00
Annapolis Jockey Club's colt's purse	200 00
Silver cup at Washington,	233 33
Match at Washington,	1000 00
At Canton near Baltimore,	200 00
Silver cup at Washington,	233 33
At Canton near Baltimore,	300 00
Washington Jockey Club's 2d day,	500 00
At Lancaster,	250 00
Washington Jockey Club's 1st day,	600 00
At Alexandria,	500 00
At Hunting Park,	1000 00
	$5366 66

Editorial Correspondence.

AMERICAN OLIVES.

Extract to the Editor—Darien Georgia, September 14th, 1823.

SIR—The enclosed is a branch of olive and its fruit, from a plant sent to Mr. Thomas Spalding of Sapelo Island, by the Hon. W. H. Crawford, four years ago, and is now bearing fruit.—This experiment shows that the olive can be reared sooner, and much more to the advantage of the cultivator, than has heretofore been supposed.

Your's respectfully,
H.

Can the writer conveniently send another specimen?—*Edit. Am. Far.*

FROM "EXPERIMENTS IN CHEMISTRY."

Lithography; or Printing from Stone.

A very ingenious process has of late years been employed to answer, at the same time, both the purposes of designing and engraving; or, in other words, to produce an engraving by the art of designing. This art is called *Lithography* or *Stone Engraving*; and among the German artists, *chemische druckery*, or *chemical printing*. It consists in being provided with a few slabs of marble, about the size of Dutch tiles, or larger, according to the intended dimensions of the print; the thickness should be about two inches.

The Landscape, or other subject, is then to be traced over with a pencil; and the pencilled lines are to be afterwards at leisure retraced with a particular ink which was at first a great secret. It is now, however, known to consist of a solution of Shell-lac, in Potass, colored black by soot from burning wax. When the design has been gone over with this ink, it is left to dry, which commonly takes about two hours, though this will depend upon the temperature and dryness of the atmosphere. The face of the marble being, after this process, washed with Nitric. Acid, more or less diluted, according to the degree of relief desired, the whole surface will be corroded, *except where defended by the resinous ink*. The operation is now completed; and to obtain printed copies, nothing more is necessary than to wash the marble clean; to distribute over it, by means of printer's balls, an ink similar to that commonly used by printers; and to press down upon the design, by a roller, or copper-plate press, a sheet of paper properly disposed in a frame.

Blacking-Balls for Shoes.

Take mutton suet, 4 ounces; bees-wax, one ounce; sweet oil, one ounce; sugar-candy and gum-arabic, one dram each, in fine powder: melt these well together over a gentle fire, and add thereto about a spoonful of turpentine, and lamp black sufficient to give it a good black color. While hot enough to run, make it into a ball, by pouring the liquor into a tin mould; or let it stand till almost cold: or it may be moulded by the hand.

Liquid Japan Blacking.

Take three ounces of Ivory-black, 2 ounces of coarse sugar, one ounce of Sulphuric Acid, one ounce of Muriatic Acid, one lemon, one table-spoonful of sweet oil, and one pint of vinegar.—First mix the ivory-black and sweet oil together, then the lemon and sugar, with a little vinegar to qualify the blacking; then add the Sulphuric and Muriatic Acids, and mix them all well together.

Observation. The sugar, oil, and vinegar, prevent the acids from injuring the leather, and add to the lustre of the blacking.

Another Method.

A quarter of a pound of Ivory-black, a quarter of a pound of moist sugar, a table spoonful of flour, a piece of tallow about the size of a walnut, and a small piece of gum arabic—Make a paste of the flour, and whilst hot put in the tallow, then the sugar, and afterwards mix the whole well together in a quart of water.

French Varnish, for Cabinets, &c.

Take Shell-Lac, three parts; Gum Mastich, one part; Gum Sandarach, one part; Alcohol, forty parts. The Mastrich and Sandarach must first be dissolved in the Alcohol, and then the Shell-Lac: this may be done either by putting them into a bottle loosely corked, and placing it in a vessel of water, heated below the boiling point of Alcohol, until the solution is effected; or by putting the ingredients into a clean Florence oil-flask, (the neck of which is partially closed by a cork, having a narrow slit along it,) it is to be heated over a spirit-lamp. The Alcohol which escapes during the process must be replaced by an equal weight of it, after the operation is over; as it is desirable that the Varnish should consist of the proportions given, in order to be good. The solution may be poured off for use, from the impurities which remain, but it must not be filtered, as that operation would deprive the Lac of some of its qualities.

Observation. In cases where a greater degree of hardness in the varnish is desirable, and its color is but a secondary consideration, one part of shell-lac with eight parts of alcohol, is to be preferred,

Varnish for Oil Paintings.

Mix six ounces of pure Mastich Gum with the same quantity of pounded glass, and introduce the compound into a bottle containing a pint of Oil of Turpentine; (treated with Alkali as above,) now add half an ounce of Camphor bruised in a mortar. When the Mastich is dissolved, put in an ounce of Venice Turpentine, and agitate the whole till the Turpentine be perfectly dissolved.

Observations. When to be used, this varnish must be gently poured off the glass sediment at the bottom of the bottle; or it may be filtered through muslin. The intention of using ground glass, is to present a greater surface of mastich, to the solvent, by throwing the particles as much apart as possible.

The following lines were addressed to THOMAS MOORE, ESQ. on the birth of his third daughter. They are by the Eaton Stannard Barret, of this city, the author of the *Heroine*.

I'm sorry, dear Moore, there's a damp to your joy,
  Nor think my old strain of mythology stupid,
When I say that your wife had a right to a boy,
  For Venus is nothing without a young Cupid.

But since fate the boon that you wished for refuses,
  By granting three girls to your happy embraces,
He meant when you wandered abroad with the muses,
  That your wife should be circled at home with the Graces.

A fashionable Doctor lately informed his friends in a large company, that he had been passing eight days in the country. "Yes, (said one of the party) it has been announced in one of the Journals." "Ah! (said the Doctor, stretching his neck very importantly) pray in what terms?" "In what terms? Why, as well as I can remember, in the following: 'There were last week seventy-seven interments less than the week before.'" The Doctor's neck was seen suddenly to shrink down, till his head nearly touched his shoulders; and shortly after he was missed from the saloon, to the no small diversion of the company.

Learning for Ladies.—"I should be glad to know (said a learned lady to a gentleman) how knowledge is incompatable with a woman's situation in life. I should like to be told why chemistry, geography, algebra, *languages*, and the whole circle of arts and sciences, are not as becoming in her as a man?" "I cannot say (replied the gentleman) that they are entirely unbecoming; but I think a very little will answer the purpose. In my opinion, a woman's knowledge of chemistry should extend no farther than to the melting of butter; her geography should extend no farther than to a thorough acquaintance with every hole and corner of her house; her algebra to keeping an exact account of the expenses of the family; and as for *tongues*, heaven knows that *one* is enough in all conscience, and the less use she makes of it the better."

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 3, 1823.

The Editor feels persuaded that such an establishment as the "Gardiner Lyceum," if not altogether new in practice in this country, is at least so little known, and yet so highly useful in its tendency, that his readers will be pleased to be made acquainted with its existence and its objects. It may lead to the establishment of similar institutions in other parts of our country with great advantage.—We have therefore given in this number, the Address to the public from the Trustees of the Gardiner Lyceum, at Gardiner, Maine; and in the next number, we shall copy parts of the address delivered at the opening of the institution by the Rev. BENJAMIN HALE, Principal of the Lyceum, and Lecturer on Natural Philosophy.

☞ Very remarkable mammoth rye was raised the last season by WILLIAM KREBS, Esq. of Baltimore county—and a beautiful specimen has been left with the Editor for distribution.

☞ Applications have recently been made to the Editor for Guinea Grass Seed—a small quantity from any of his subscribers would be very acceptable.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard street, from wagons, $7—Superfine, $6 50—fine do. $6 25—Wharf, do. $6 25, cash—White wheat, $1 25 to 1 35—Red do. $1 15 to $1 16, a few sales at $1 25—Rye. 40 to 45 cts—Corn, 38 cts.—wharf Oats, 26 a 30 cts.— wagon Oats, 31 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50, per cwt.—Bacon, hog round, $10—Pork, $7 50 per c. lb., 6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, retail, $1 50, cargo price, 1 12½—Peas, retail, 75 a 80 cts., cargo price 58 a 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 28 to 30 cts. per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl., No. 2, $2 37½—Fine Salt, 60 to 65 cts. per bush., coarse, do. 70—Butter, (firkin) 14 cts. per lb.—Eggs, 12½ cts. per doz.—New Hay, $15 per ton, old do $18—Straw, $8.

MARYLAND TOBACCO.—Fine Yellow, none—good do do.—Fine Spangled, $18 to $25—Fine Red, $10 to $16—good do. $6 to $8—common do. $4 to $6—Dark Brown, $2½ to $3½.

Sales.—A crop of Fine Red and Spangled, 7 hhds. raised by Mr. Noah Worthington of Baltimore county, $20—Fine Upper Patuxent, $12 to $16—inferior qualities, large sales, from $2½ to $6.

Cow and Calf For Sale.

Avery fine cow with her second calf; she was got by an imported bull of the Herefordshire breed, and her present calf by a full bred Devon Bull—she is remarkably gentle, and easy to keep in fine order.—Enquire of the Editor.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

INTERESTING EXTRACTS.—*From Agricultural and other Addresses and Memoirs, on file in the office of the American Farmer.*

From the Inaugural Address, delivered at Gardiner, Me. January 1, 1823, by Benjamin Hale, principal of the Gardiner Lyceum and lecturer on Natural Philosophy.

The discoveries of modern science have opened to us more just views, and led to a more rational mode of investigation. The operations of nature are no longer regarded with a mysterious dread, or as the capricious movements of a doubtful agent, or under the control of stellar influence;—but as subject to fixed and unvaried laws, established by a benevolent Deity, and accommodated to the wants and the highest happiness of his sentient creation.

Philosophers too have thrown aside their veil of mystery, and have become the public teachers of mankind. They disclose the secrets of nature, and the manner in which they may be made subservient to the uses of life. They have interpreted the written scroll, which shines in golden characters above our heads, not as a book of fate, which like the hand writing upon the wall, is full of terrible but unintelligible import, but as a chart, which kindly serves to guide the wanderer upon the trackless ocean, or over the unknown desert, to his desired home.

In consequence of this change in the character of science, in the dispositions of its votaries and the benefits it has laid at the door of every man, prejudice against it has nearly ceased. We would say quite. But there are still many who receive its benefits, without confessing their obligations,—who yet look upon it as something of a useless nature. And perhaps most men regard it as belonging to the closet, the laboratory or the lecture room, rather than the work-shop, the manufactory, or the field.

But though philosophers have hitherto been for the most part, secluded from the common pursuits of life, and have made their attainments from the study of books, or from private experiments, they are not the only men of science.—There are thousands, who call themselves practical men in distinction from men of science, who in truth derive all their merit from the science, which they have unknowingly united with their practical skill. It is forgotten, that every operation in the arts is really an experiment in philosophy, and as truly illustrative of some law of nature, as any performed in the laboratory or the lecture room; and that every artist, who understands the reason of the operation is so far a man of science.

The connexion between science and the arts will be still more manifest, if we observe its nature. From what cause is it, that the mechanic is able to carry on the process of his art; or why do these processes produce the result, that is desired and obtained by them? Why is it, e g. that the tanner is able, by immersing his hides in an infusion of bark, to give them the closeness and firmness and insolubility of leather? We learn from chemistry, that it is in consequence of a union between an ingredient in the skin and a principle of the bark. The whole operation then is founded upon the law of nature, which establishes the affinity between these two substances, and which it is the province of science to investigate. In the same manner, it is science which discovers the nature of all the operations in the arts. It is science therefore, which must explain these operations, and though a man of ingenuity will sometimes uninstructed attain a general understanding of his processes, yet without it he can never fully comprehend them.

Such then being the connexion between science and the arts, it is manifest, that the artist might expect many advantages from uniting scientific views with practical skill. Among others, He would be able to go through his processes with greater certainty of success. We will illustrate our idea by reference to the art of dyeing. How many circumstances are there which may concur to prevent success in giving the colours or shades, which are desired! The materials used in making a dye may vary in their quality, may contain more or less than usual of the colouring matter, may contain it mixed with foreign ingredients, and thus by destroying the proportions or otherwise changing the nature of the compound, may fail to produce the colour desired.—Against such an accident, the unlearned artist is not provided. He has but one rule for mixing his ingredients, and this always supposes them to be of an invariable quality. But science by giving him the means of ascertaining their quality, enables him to vary his proportions according to their strength, or to remove any causes of failure, which may exist. The art of dyeing, in all its branches, depends upon chemical principles, and every one who attempts to practice it without a knowledge of this science, must always proceed in the dark, and be always doubtful of his success.

The same benefit of science is illustrated in a case, with which the public prints have lately furnished us. A Scottish gentleman, acquainted with Chemistry, went a few years ago to India, in the service of the East India Company. His knowledge of Chemistry recommended him to the Governor, and he was employed in the manufactory of Gunpowder. He applied his knowledge to correcting the operations of the ignorant manufacturers whom he found there, and with such success, that he was soon placed at the head of the establishment, and has since returned to his native island with the wealth of an eastern prince.

Another advantage, which the arts might expect from a connexion with science, is the discovery of new and improved processes. On this point too, recent improvements furnish us with a striking instance, by which it can be at once illustrated and confirmed.—The process of bleaching, which formerly consumed many weeks is now the work almost of fewer hours, and the texture of the cloth is preserved from the injury, which it sustained from the long exposure of the ancient method. This great saving of time, and improvement in the fabric has been effected by the introduction of what is called *the chemical method.*—It was discovered by Scheele, that chlorine would discharge the colour from animal and vegetable substances. A few years after this, Berthollet applied the discovery to bleaching. The application was made about the same time in England, and the first considerable experiment, which was made to establish the utility of the discovery, was upon a piece of calico, the whole of which, "taken in the state, in which it left the loom was bleached, printed in permanent colours, and produced in the Manchester market for sale, having undergone the whole of these operations in 48 hours." This was in the spring of 1788. The experiment was immediately followed by a large bleaching establishment. The origin of this valuable improvement was in the discovery of a chemist; the first applications of it to bleaching were made by chemists, and the art, from its early stages to its present improved state, is to be regarded as a monument of the practical utility of science.

We may name, as another of the benefits, which science has conferred, and may still be expected to confer upon the arts, the immense saving of labour and expense. In the process of bleaching, to which we have just referred, many thousands are annually saved to single bleaching greens, by one discovery. How much expense as well as danger, is avoided in the large manufacturing establishments of Great Britain, by the use of gas lights!—Of what incalculable benefit have Watt's improvements in the Steam Engine, been to his native country, and to our own by its application to the Steam Boat:—and with what extreme cheapness are your cotton, and other fabrics furnished in comparison with their former expensiveness!

We may be told, that improvements in manufactures and the arts have been made by men unskilled in science. This is true indeed to some extent, but by no means so far as is supposed by those who assert it. Sometimes discoveries are made by ignorant men, but they are then the result of accident, and such instances would hardly be urged, if it were known how many fortunate accidents are daily lost to the world, through want of that knowledge, which would enable an artist to turn them to advantage. Most of the inventions and improvements, which have been made by men, who have not been favoured with early education, have not been made in ignorance of science. These men, by superior capacity and superior industry, united to a strong native propensity to such studies, have been able notwithstanding the disadvantage of their situation, to make those attainments in the elements of science, which we recommend, though their science is often overlooked, because they are not familiar with its phraseology, and are not able to state the results, at which they have arrived.

It is easy to see that we cannot calculate upon great improvements or discoveries from men of no education. Compare the ability of such men with the improvements, made by Watt, [and Perkins] in the steam engine. How many are the impassable barriers, which meet them in the very outset! What do they know of the subject of latent heat?—of the elasticity of steam?—of the quantity of latent heat, existing in steam?—of the ratio between the elasticity of steam and the degree of heat? and what do they know of, or how shall they investigate, a thousand other things, upon which the scientific, as well as ingenous Watt, founded his improvements?—The truth is, such men do not know even the very existence of the agents, which are necessary, in a great variety of cases, to be employed, and what then can be more unreasonable than to expect them to make discoveries, or to suggest improvements!

The value of science in facilitating useful discoveries may be well illustrated by the history of Sir H. Davy's beautiful invention of the safety Lamp, not only because this invention is one of the noblest triumphs of science, but because we can retrace the steps by which it was attained.—In the coal mines of England there is often found a mixture of gases, called by the miners *fire damp*, because it immediately extinguishes the lamp which lights their labor. But this is not its worst effect. The fire damp explodes, and few of the miners escape instantaneous destruction The danger arising from this source, had caused several valuable mines to be abandoned, and in those, which were still worked, there were yearly more or less of these fatal accidents. Several attempts to light the mines without danger, had been made before the invention of Davy, and with tolerable success. But his, uniting simplicity with safety, has taken the place of every other, and has left scarcely any thing for ther to be devised.—Davy had discovered that explosions could not be propagated through a long tube of small diameter, and upon this hint he proceeded. He diminished the strength of his tube, and found it to have the same property, till in a very small tube the length was reduced to an equality with the diameter. He then had a lamp covered with a fine wire gauze, having the diameter of the interstices equal to that of the wire, and these acting like tubes, prevented explosion, although the lamp was immersed in an explosive mixture: and a lamp thus covered, and furnished with little other apparatus, is the lamp, with which mines the most dangerous, can now be traversed in safety.

Though we have thus far illustrated our remarks upon the benefits to be expected from a union of science and the arts, principally by examples drawn from those, which are dependent upon chemical principles and which are not the most common, especially in our country; yet it must not therefore be inferred, either that chemistry is the only science which is of practical importance, or that the more common arts have not equally with others, their foundation in scientific principles. The remarks which have been made are general, and the illustrations we have given, were selected for their aptness, and not for their singularity.

The truth is, there is no art which is not so connected with science, that it may expect important improvements from scientific investigations, and there is perhaps no science, which has not almost innumerable practical relations. What knowledge, *for example*, can be more useful to a certain class of men, than *mechanics*,—that science, which treats of the laws of moving bodies; their velocities, their momenta, and their direction;—of the nature of the various moving forces; the laws of their operation; the manner in which they are applied, and of the composition and direction of forces. Without an acquaintance with this science, how shall the mechanic accommodate the power of his machine to the quantity of effect to be produced? How shall he adapt its parts so as to give it a free and easy motion, and to obtain with a given velocity in the power, a required velocity in the weight? How important to him also are the investigations of the philosophers concerning friction; of the laws by which it varies with the weights, or surfaces, or velocities of moving bodies; and the means of overcoming it. But valuable as is a knowledge of this science in all cases, to those who have the direction of machinery, its value is doubled, or rather it becomes absolutely indispensable, when any new machine is to be constructed, or an old one is to be adapted to some new purpose. It is then the only guide. It makes the mechanic understand the means by which his end is to be attained; and after his ingenuity has suggested a plan upon which his machine shall be constructed, it enables him to calculate its power, and to ascertain to a considerable degree of certainty, its value, without the loss of time and labor and expense in experiment. How many times would this science, in this way, prevent the failures of ingenious men;—how often would it prevent ingenuity being wasted to no purpose, in attempting to construct impossible machines, or in proceeding upon false principles. How often would it prevent the abandonment of a valuable design, by assisting the inventor to discover the impediments which hinder his success, or to make a more judicious application of his principle! How often would it enable the mechanic to make new applications of principles, which are developed in machines of attested excellence; and how many times would it suggest such simplifications of valuable but expensive machinery, as to facilitate its introduction into countries, and its use by corporations of limited capital!

The mathematical sciences too, are capable of applications to useful purposes, to an extent almost as unlimited as the infinity of their own numbers, or as quantity itself. They embrace every thing capable of being measured, and they are the foundation of all calculations. They aid the astronomer in investigating the laws, which govern the revolutions of the heavenly orbs; and to deduce from them all those principles, and to construct those tables which enable the mariner to ascertain his situation, when he can see nothing around him but the monotony of the dashing waves, and to direct his bark to his distant and invisible home.

But the path, in which we are leading you, is without an end, and we will require you to follow us but little farther. Agriculture is in itself, too important, and it will be an object of too much attention in the Lyceum, not to be noticed on this occasion. The intimate connexion of this art with chemistry, is now well understood and generally acknowledged. The superior success, with which the earth has recently been cultivated by men who have brought to this employment, minds expanded by science and stored with its principles, is enough to adduce in reply to all the objections of ignorance, and of the most bigoted prejudice in favor of the modes, which age and the practice of ancestors have sanctioned. Though agriculture is the most ancient of the arts, it was not so the gift of Heaven to man, that it is not like other arts capable of his improvement; and its progress from its primitive rudeness to its present state, is sufficient to induce the hope, that it may still advance, and that future generations may carry it to a degree of perfection, beyond what even the most sanguine have ever conceived. But our expectations of great improvements are founded in the rapid advances of science, and of that just philosophy, which makes science the handmaid of the arts. The illustrious Davy and many others have directed their attention to the different subjects of inquiry in agriculture, and they have raised Agricultural Chemistry almost to the rank of a distinct science. If its claims to this rank were to rest upon the extent of the field, which it opens for investigation, they must certainly be admitted. To quote the words of the distinguished chemist, whom we have just named, "Agricultural Chemistry has for its objects all "those changes in the arrangements of matter, "connected with the growth and nourishment of "plants; the comparative values of their produce as food; the constitution of soils; and "the manner in which lands are enriched by manure, or rendered fertile by the different processes of cultivation. Enquiries of such a nature cannot but be interesting and important "both to the theoretical agriculturist, and to the "practical farmer. To the first they are necessary in supplying most of the fundamental "principles, upon which the theory of the art "depends: to the second they are useful in affording simple and easy experiments for directing his labors, and for enabling him to pursue a certain and systematic plan of improvement."

"It is scarcely possible," as the same writer remarks, "to enter upon any investigation in agriculture without finding it connected, more or "less, with doctrines or elucidations derived from "Chemistry."

In exhibiting, as we have endeavoured briefly to do, the connexion of science with the useful arts, and shewing the importance of the former as the foundation of the latter, we have given you in part the views, which led to the establishment of the Gardiner Lyceum.—It is the object of this institution to give instruction in those branches, which are most intimately connected with the arts, and to teach them as the foundation of the arts. In this respect we believe its design to be original. There are many institutions in our country, where these sciences are taught, and we are proud to boast of one in our own state, where they are taught with singular success. But the education at College is designed only as a general introduction to the liberal sciences; it furnishes a mental discipline and is intended to enlarge the views of those, who are afterwards to pursue the study of some particular profession. It embraces too wide an extent—it consumes too much time, and is attended with too great expence, to be attained by the greater part of the community, and especially by those, who are to pursue Agriculture, or some mechanical profession for their support.—But were it otherwise; were it in the power of these classes to obtain an education at College, it is not an education suited to their wants. They do not merely require to be instructed in the sciences, but to be taught these sciences in a practical manner. It is not sufficient for them, as for the general scholar, to be taught the common laws of chemistry;—they must be instructed particularly in the chemistry of Agriculture and the Arts. It is not sufficient for them, to be able to repeat and to demonstrate a few of the general laws of mechanics:—they must be taught the application of the laws; they must be made acquainted with machines; and they must understand the sources of error in applying theory to practice. These things are not done at our Colleges—not from any defect in their systems, but because it would be aside from their design. One class of students could with no more propriety expect that the physical sciences should be taught with minute and constant reference to the wants of the mechanic and farmer; than another, that all instruction in the learned languages should be directed to making proficients in biblical criticism; or a third, that Ethics and Political Law should be so taught, as to prepare them for the litigations of the bar, or the deliberations of the Senate chamber. But it is plain that to practical men, science must be taught in a practical manner. We are taught this by the frequent failures of men who are not deficient in the general principles of science, but who are unacquainted with the particular science of the arts. It will not be said then that the founders of this institution have assisted in unnecessarily multiplying seminaries of education, for it is new in character, and it is designed to supply the wants of a large portion of the community, for which no provision had hitherto been made. Nor will it be said, that these wants are not real. The education of the advocate or divine is scarcely more necessary to his success, than that of the mechanic or the farmer. If the professions of the former are themselves branches of science, those of the latter are founded in science. And as we expect empiricism from those, who enter the learned professions without a suitable preparatory education, so we can expect nothing but deficiency of skill in mechanics, who have been taught only the manual exercise of their arts. There surely can be no reason, why mechanics and agriculturists should not be instructed in that science, which will enable them to follow their pursuits not blindly, but from rational views. Those who have not this education, may indeed copy faithfully the practises of their fathers, but we cannot expect from them improvements which shall enrich their country and benefit the world. Is it extravagant to suppose that there may be many Watts and Wedgewoods scattered through our country; their talents buried in obscurity, and not known even to themselves from the want of opportunity for their developement? And would it be presumptuous to hope, that at this institution, some of these intellects may receive their first impulse, and be first directed into that path which will lead them to honour and extensive usefulness.

APPENDIX.

Instruction at the Lyceum will be given at recitations, of which there will be three each day. According to the plan in our Colleges, there will be but one class admitted each year. The year will commence in August at the close of the Summer vacation, and those who offer themselves for admission at any other time, will be examined not only in the preparatory studies, but in those which the class into which they enter have passed, previously to their admission. For admission to the Lyceum, a knowledge of the four fundamental operations of arithmetic, both upon simple and compound numbers, and of reduction is required. After July next will be added the rudiments of English Grammar.

The whole course of instruction will occupy three years. The studies of the *first year* will be Arithmetic, Algebra, Geometry, the Measurations of Surfaces and Solids, Trigonometry, with its application to Heights and Distances, Book-keeping and Rhetoric. Those of the *second year*, Surveying, Navigation, Mechanics, theoretical and practical: Hydrostatics and Hydraulics: Pneumatics and Chemistry, with its application to Agriculture and the Arts. Those of the *third year*, Magnetism, Electricity, Optics, Astronomy, Fluxions, Natural History, and the Philosophy of the Mind.

The studies are so arranged that those of the two first years will make a course of themselves, and students who may be unable to remain longer than two years, can leave at the end of the second. To the second and third classes, lectures, accompanied with suitable experiments, will be given upon Natural Philosophy and Chemistry.

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TO THE EDITOR OF THE AMERICAN FARMER.

Charleston, September 25, 1823.

DEAR SIR,

As I am sure you will feel gratified to suppose our Agricultural Society are attempting to be useful in promoting the cause of agriculture, I send you a list of Premiums for the year 1825, which were proposed and adopted at our last meeting on the 16th inst.—Whenever you can find room to insert them in your paper, you will oblige not only the members, but also

Your faithful friend,
and obd't servant,
CHARLES E. ROWAND.

As soon as my Harvest is over, I shall plant the Woad in a paddock where there shall also be planted oats—in the course of the winter, I shall be able to judge of the practicability of its being used as a winter pasture; and also which of the two, the cow or horse will prefer.

The South-Carolina Agricultural Society, at their last meeting, held on the 16th inst. received from their Committee of Arrangements the annual list of premiums intended to be awarded by them in the year 1825. Although it has been customary to announce the premiums of a subsequent year after those of a former year have been disposed of, it is now nevertheless thought proper to publish their list at this early period, with a view to give sufficient time to competitors, to bestow that labor upon the land intended for the cultivation of flax that is absolutely requisite, preparatory to the time of planting, which is in November. The society actuated by the prosperous state of the funds, and the great accession of members, have increased the number of their premiums, in the hope that it may operate as a stimulus to induce planters to come forward with the result of their attempts, and thereby forward the views of the society, by promoting the good cause of Agriculture. As a further incentive to exertion, they have extended their design to imported animals, provided they have been kept for service the preceding twelve months.

Report of the Committee on Premiums to be awarded by the South-Carolina Agricultural Society in the year 1825.

The improvement of the agriculture of our country being the object of our institution, the society has judiciously resorted to the exhibition of premiums, as one of the means of promoting it; but much of the success to be hence derived, must depend on the proper management of this auxiliary.

Premiums may be considered as useful in three points of view—First, as an encouragement to industry; secondly, as an incitement to intelligent enterprise; and thirdly, as the instrument of communicating the results of the two first points, and thereby diffusing the knowledge acquired by the experience of individuals throughout our country. It may perhaps be thought, that with respect to the encouragement of industry, the prevailing principle of self-interest is a sufficient inducement to impel the agriculturist to make exertions to procure the best crops. Yet when we consider how powerful a motive is the love of distinction—how much may be effected by the stimulus of emulation—and that to the pecuniary circumstance of some, our premiums, however small, may occasionally be convenient, it may be hoped that it will prove useful to offer this additional encouragement to industry. But while we hold out this inducement, it is important that premiums be so calculated as to draw the attention of our brother farmers only to useful pursuits.

In promoting the second point of bringing into operation the intelligence and inventive faculties of our agricultural friends, by proposing to them the application of new modes of culture to our present crops, and the introduction of new articles as substitutes or auxiliaries to what we now possess, our premiums may be expected to have a more powerful effect; hence the caution recommended in the former point is more necessary here, when we abandon the useful guide of former experience, and venture on untrodden ground. For unless our premiums shall be dictated by sound, enlightened judgment, they will have the effect of the ignus fatuus while it is our ambition to become the polar star of our country's agriculture. In order to render more certainly beneficial the diffusion of agricultural information, which is the object of the third point, it will be necessary that it be made a condition for the attainment of every premium, that a detailed account be rendered in writing by the candidates, not only of the product, but by the mode of culture, and cost in money, and labor expended on it, together with the situation and quality of the land, and its value at the present prices; and in order to avoid being missed by the results, if favorable or adverse seasons, or by the extraordinary natural quality of the land, it is proper that each experiment should be so far comparative, that an account be given of the product of an adjoining or neighbouring piece of land of equal size; bearing the same article, in the same season and cultivated in the usual manner. So the breed of all animals exhibited for premiums, the food on which they have been raised, and the general treatment while young, together with cost of raising them, and an estimate of their present value should be required. The reasons for these condition are obvious, because it would be of little advantage to those whom we desire to benefit to know that large crops have been made, and fine animals raised, unless they are informed of the means whereby they have been obtained; and are shown that they have remunerated the labor and expense of procuring them.

While considering what objects it would be proper to recommend to the Society for premiums the ensuing year, the committee have reviewed those of the present year, and as they in general accord with the views of the subject above stated, they have inserted them in the list now presented, because they are fully of opinion that no practical inference can safely be made from the result of a single experiment, but a concurrence of several, and those made in different seasons, should take place, before extensive practice should be founded on them. To these the society have added, for which they believe our funds will be adequate. The first is for the encouragement of a class of our agricultural fellow citizens, whose agency is of the utmost importance in our rural concerns. The Gold medal offered to the most meritorious manager of two or more plantations, it is hoped will be an additional stimulus to the gentlemen of intelligence, education and good conduct, who have of late years dedicated themselves to this profession, and whose management has already improved our planting system, and may at the same time induce others of good education and respectable connexions to adopt the same pursuit. The encouragement offered by the second to overseers, may excite their exertions to good conduct, and when obtained, will be the best recommendation they can produce on change of situation. The premium for the experiment on the culture of flax, is suggested with the view that this article, which is considered of such high importance in the agricultural districts of Flanders, Holland, Germany, Ireland, and other regions where the profits of husbandry are accurately understood, may be introduced as a substitute, if necessary, to the articles which at present occupy our fields.

Flax in this climate derives an additional value from the circumstance that it may be cultivated here in the winter, and although this occasionally takes place in the colder countries above referred to, yet the severity of their winters materially injures the quality of the flax, while the mildness of our season seems only to retard its growth a sufficient time to enable the staple to acquire the length and firmness requisite for its perfection. In proof of this assertion, your committee present for the inspection of the society, a sample of flax raised by one of their members, which was sown in the middle of November and pulled on the 18th April last. If no regard was paid to the production of the seed, it might have been gathered on the first of April, when it was in full bloom, and it is probable that if sown here in the end of October, it would be fit for the fabric of fine linen early in March, and for seed by the first of April, leaving the field free for any other purpose during the whole summer and autumn. It is unnecessary to use arguments to prove the immense importance of a product, said to be equal in value to a crop of cotton, which may be obtained in addition to the crops usually cultivated on the same land.

The subject of encouraging by premiums the introduction of improved instruments of husbandry, has also occupied the attention of your committee, and they have found that the plough, which is the most important of these, and indeed forms the basis of husbandry, has been of late so highly improved in its construction, and so extensively diffused through the state that it requires no further encouragement.—The most important desiderata appear to be a good threshing machine applicable to rice, and a moating machine for cotton, which they have added to their list of premiums. The committee therefore present for the consideration of the society the succeeding resolutions.

Resolved, That the following premiums be awarded by the society at their stated meeting in February, one thousand eight hundred and twenty-five, to consist of the Gold Medal, value twenty dollars, or the Silver Medal, value ten dollars, or pieces of plate of equal value, at the option of the fortunate competitor, with appropriate inscriptions:—

For the best conducted experiment to be made in the year one thousand eight hundred and twenty-four, on not less than one acre of land, not more than 210 feet square, wherein, by any mode of culture not heretofore generally used in the state, or by the application of any manure, in quantities not generally practised, the production of black seed cotton shall be materially improved—the Gold Medal.

For a similar experiment on green seed cotton—the Gold Medal.

For ditto on Rice—the Gold Medal.

For ditto on Flint Corn—the Gold Medal.

For ditto on Gourd Seed Corn—the Gold Medal.

For ditto on Sweet Potatoes—the Gold Medal.

But the committee will not consider either of the above experiments entitled to the premium, unless the product of black seed cotton shall amount to 100 pounds per acre, that of green seed 400 lbs.—of rice to 80 bushels, of Flint Corn to 40 bushels, of Gourd Seed Corn to 70 bushels, and of Sweet Potatoes to 450 heaped bushels.

For the best Stallion—the Gold Medal.

For the best full blooded Mare—the Gold Medal.

For the best Mare for improving the breed of farm horses—the Gold Medal.

For the best Bull for raising working Oxen—the Gold Medal.

For the best Bull for raising milch cattle—the Gold Medal.

For the best Cow for each of the above purposes—the Gold Medal.

For the best Ass—the Gold Medal.

For the best Boar—the Silver Medal.

For the best Sow—the Silver Medal.

For the best Ram—the Silver Medal.

For the best Ewe—the Silver Medal.

For the best conducted experiment of the cultivation of winter Flax on swamp or marsh land—the Gold Medal.

For the same on high land—the Gold Medal.

In order to obtain either of the above prizes, the candidate must forward to the Secretary of the Society a particular detail of the quality of soil, the preparatory culture, the quantity and preparation, if any of the seed, the kind and quantity of manure, and time of its application, the culture while the crop is growing, the mode of collecting in harvest, and the produce; stating also the produce of the same quantity of land, of similar natural quality, cultivated in the usual manner in the same season. The facts and circumstances to be attested by one or more respectable witnesses. In order to facilitate the compliance with this condition, printed returns with the heads of such information as the society requires, compendiously arranged, will be furnished to those who may require them, by the Secretary of the Society, on application at his house, No. 35 Meeting-street, Charleston.

For the best constructed machine for threshing Rice, which has been in actual operation for one season, adapted to general use, by the small power necessary to give it effect—the Gold Medal.

For the best machine whereby the moating of cotton, usually executed by hand, may be completely performed—the Gold Medal.

To the Manager of two or more plantations, who shall produce the most satisfactory testimonials from those by whom he has been employed, of his diligence, skill, good management and humanity, for three preceding years—the Gold Medal.

To the Overseer of one plantation, who shall produce similar testimonials—the Silver Medal.

The animals to be produced before the Society at the house of their meeting, at the old Race Course, on the Monday and Tuesday previous to the Charleston Races; when convenient, a specimen of the progeny of each to be produced, as the best evidence of the value of the animal; without it, a certificate of their ability will be required; and, in all cases, certificates of their having been bred within the state, or having been imported, and kept for service the preceding twelve months.

JOHN HUME, President.

CHARLES E. ROWAND, *Secretary.*

Charleston, Sept. 23, 1823.

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FROM THE NORTH AMERICAN REVIEW.

ARTICLE—ENCOURAGEMENT OF MANUFACTURES.

When we witness the zeal, with which the cause of manufactures is pleaded, and duties on foreign importation are demanded, we cannot but ask, with what justice so large a portion of the agricultural, the commercial, nay the manufacturing capital and industry of the country is to be forced out of the channels, in which it has flowed so long and so profitably, for the sake of providing a bounty for those branches of industry, which, were they profitable, would need no bounty! To destroy the importation of foreign manufactures would, as its first effect, be to reduce very low, if not to annihilate the market for our great southern staples. It would be to force the South Americans and the Hindoos to supply the British market with cotton, which they soon would be able to do, if the British manufacturer were unable to pay for our cotton with his fabrics. Let it not be said we should at home consume all the cotton which we now export. On the contrary, if it be correctly maintained that in general raw materials increase seven fold in value by manufacture, we should consume only one seventh of what is sold in England. We should be committing therefore on a large scale, the same error which England has committed on a small one, in forbidding the importation of timber from the north of Europe. She has injured her manufactures by taking away a market from them, and she provides timber for her navy at a greater expense. But this is not the worst, that would happen to us, by building up manufactures at the expense of our commerce; we should destroy the most flourishing *manufacture* now existing in America. After the little domestic manufactures, by which single families supply themselves with the necessaries of life, and small mechanics and artizans provide the most essential commodities for their villages (which, though insignificant in any one instance, probably amount, in the aggregate to one hundred millions of annual value, throughout the United States) next to these and far before any of the great manufacturing establishments of cotton, of wool, of iron, or of glass, we place *the manufacture of ships.* The tonnage of America in 1810, was estimated at seventy one millions of dollars in value; two thirds of which were employed in the foreign trade. With the exception of a considerable part of the sailcloth, and an inconsiderable sum for hunting for colors*, this vast amount of value is produced out of the growth of our own soil, and of our own forests. On an average of all the years from 1803 to 1816, Dr. Seybert found,† that the annual amount of new tonnage in America, was 102,811 tons exceeding that of the British Empire. This gives an annual *manufacture of tonnage* of five millions of dollars. This branch of *manufacturing industry* therefore must be two-thirds of it, sacrificed, and to promote *other manufactures.* And yet this vast amount of manufacturing industry is employed and paid by commerce, only in the very first step of her operations. This annual bounty of five millions of dollars paid to the forester and woodman, to the iron founder and smith, to the carpenter and shipwright, does but bring the vessel to the quay. Seventy thousand seamen, with their wives and children are next to be clothed and fed, or, in other words, more than nine millions of dollars are paid annually by commerce, in the single article of wages to seamen, at the rate of eleven dollars per month. As no account is here made of the superior wages of captains and officers, this estimate is quite within bounds. The subsistence of the crews, at the rate of twenty cents the man per day, amounts to over five millions of dollars per annum. And thus, in the pay and sustenance of seamen alone, fourteen millions of dollars are annually expended by the commerce of this country, in the wages and subsistence of the laborers it employs. Combining this with the five millions annually required to keep the American tonnage in repair, we have nineteen millions annually disbursed by the *ship manufactory*, to the laboring classes of the community. Here we stop, though it is as we have said, the first stage of commercial operations. We say not a word of the industry required to prepare the outward cargo, or vend the return cargo, each of which is put in motion by commerce, the former to the enriching of the great agricultural states, and the latter resulting in the growth of the great commercial cities. We say nothing of the service rendered to every individual, however remote or distant he may be, who is enabled by commerce to take advantage of the crowded population, the accumulated capital, and the intense competition which prevail in foreign countries; and thus purchase the most useful and necessary articles at the cheapest rate. We say nothing of all these, but we rest on the simple preliminary fact, that the commerce of this country, in the outset of its operations, without reckoning profit on an ounce of produce shipped for exportation, pays to the hard working industry of the country, nineteen millions of dollars annually. When it shall be proved that any or all of the manufacturing establishments of the United States do this, it may me argued with some plausibility, that they deserve to be built up at the cost of our commerce. Meantime a moment's reflection on this vast amount, which is paid by commerce in annual wages to those whom it employs, abundantly shews, that in commercial enterprizes, comparatively speaking there is a vast consumption of labor and a small one of capital. To erect any manufacturing establishment, with tolerable prospects of success, a hundred or two hundred thousand dollars are wanted in the outset. There is not probably an American merchant ship that floats, worth forty thousand dollars, and the great mass of our navigation consists of vessels which are built and fitted for sea, at a cost of from four to twenty thousand dollars. With this small outfit, the globe is circumnavigated, and the fertility, the cheapness of labor, the peculiar staples, the accumulated capital and improved arts of every country, are laid under contribution to enrich ours. Certainly this is the circumstance which has caused our commerce to flourish so much beyond our manufactures. Not a want of capital, as some writers allege, but a want of capital in those great masses, which are required to set up manufacturing establishments. Capital, instead of being scarce, is abundant in this country, if by capital we mean such an amount of value as enables a man to undertake and prosecute an independent business. But it is in small amounts—Without reflecting that the existence of capital in small and widely diffused portions is, like the statute of distributions which is one great cause of it, not a disadvantage, but the happiest feature of our political condition; without reflecting that our progress is so rapid, that notwithstanding its perpetual division and distribution, capital is already gathering itself into masses, competent to the most expensive undertakings; our manufacturing writers have hit upon the notable device of raising a capital to carry on this business; and the burden of all their writings and addresses is 'we wish to raise a capital large enough to carry on a woolen factory, and we call upon every consumer in the country to pay us twenty cents on every dollar he consumes, toward raising this capital, of which we stand in need.' Such claims need but be plainly stated.

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* *Tench Coxe's Statement of the Arts and Manufactures of the United States of America, p. xix.*

† *Seybert, p.* 310, 311.

ON MILDEWED WHEAT.

Remarks by the Editor of the London Farmer's Journal, dated, August 11, 1823.

Our very respectable correspondent (Mr. Hillyard) has, in this day's Journal, revived the discussion of the mildew subject; having, it appears, adopted the opinion that excess of nutriment causes the disease, under certain circumstances, by exuding through the straw. It is certain that when the mildew takes place, the ascent of the sap is in proportion arrested and the perfect filling of the grain is prevented, or stayed, in proportion as the disease takes place, early or late, as to the progress of ripening. If the grain be filled, and a little approaching to hardness, the disease only takes off somewhat of the brightness of the quality, by shrivelling the later grains: but if the grains be milky, and the disease bad, the produce may be shrivelled up, and the ears ripened perpendicularly with nothing in them that can be threshed out.

But if the nutriment, by excess, burst through the straw, why or how should it take the form of a fungus? for this fact is not to be doubted. Neither if accidental *frosts* arrested the sap, and caused it to come through. would this consequence follow. The sap might form a gummy, or, at last, a powdery matter: but clearly it must be a semi-liquid substance at first. It is not, therefore, the exuding of the sap. There have been facts observed, and stated in this Journal, which sufficiently refute the above notions; and, unfortunately, there have not been any theories of the mildew but what are rendered nugatory by the contradictory circumstances under which the disease takes place. The Editor once observed in a field near Lynn, a crop of wheat, growing part on a rising hill, which was short and standing, and part in a hollow down towards the fence, which was long and laid flat. The first part was nearly destroyed with mildew, but the latter was bright and good. The hilly part of this field was rather a poor sandy loam, but, deepening to the hollow, the soil was approaching to clay. This latter had by far the most nutriment, but it did not burst through. On a farm at Ketton, near Stamford, some years ago, they were reaping early wheats about the middle of August, very much mildewed, though light and middling crops. Some crops on the same farm were then green and much heavier, and would not be reaped in less than a fortnight: these proved bright and good. Upon due examination, the soil where the first grew was shallow and full of small loose stones, but the other part of the land was clay, though not good, yet well worked. These and all other facts which we have observed, go to prove that good clay soils seldom mildew their wheats; if there be an over proportion of vegetable mould, or of raw dung, or if the bottom be impenetrable to the fibres, or ill-drained where it is impervious to water, the mildew may take place. It appears, therefore, to be not the quantity, but the *kind* of nutriment, which may cause or prevent the disease; or rather, it is owing to the atmospheric changes to which light and pulverulent soils are liable: frequent rains after a series of warm weather (and contrariwise) may affect the fibres having but loose hold of the earth, in a very different manner from those which, on the approach of harvest, are impacted in a self-moist clay soil. The effect seems to be that the health of the plants is interrupted, they fall into a state of premature decay, and, like all decaying vegetables, throw out fungi.

Excepting what is indicated by this general mode of expression, our agricultural readers may rest assured that the *cause* of the mildew will never be discovered. Sir Joseph Banks having ascertained that in every speck, or blotch, in the straw, there was a crop of *fungi*, and that the heads of these ripened and discharged a black powder, directly inferred that this powder would spread on other straws and propagate the disease. In the same manner those persons must have argued who have ascribed the disease to neighboring barberry-bushes. But the truth is, that the mildew cannot be propagated by any outward application of diseased plants to healthy ones; nor by any mode of contact however varied, as to heat or moisture, and progress of ripening. It is also quite certain that the disease, in making its appearance, breaks through the cuticle, or outward skin of the plant, indicating the fact that the seed which, by vegetating, produces the visible effect, is enclosed in the parenchymous substance of the culm. It seems, therefore, that we are under the necessity of believing that these seeds (inconceivably minute) are absorbed from the soil with the food of the plant; and if so, there is no difficulty in supposing that soils most liable to mildew, are most charged with these seeds—and that the crops growing thereon are more filled with them than such as grow on good clays, where the straw is reedy and hard. If this reasoning be not satisfactory, we have nothing else to say, but that it is the *nature* of certain soils to mildew their wheats in certain seasons. The disease being a parasitic plant, we must say that nature has endowed the straw with a *formative nisus*, or power of producing the plant under certain effects of the atmosphere but really there are innumerable other facts in nature which are equally inexplicable, and which give us no disturbance at all. It is, however, very creditable to the ingenuity and research of those who have done all in their power to open this source of knowledge, so as to render benefit to agriculture; though unfortunately it amounts to no more than a steady conviction, now taking place, that the disease is by no means to be prevented.

MEMOIRS OF MR. ROTHSCHILD.

Mr. N. M. Rothschild is descended from a German lineage. Mr. R. sought to establish his fortune in England. Various were his vicissitudes in early life; by his industry and prudential conduct, he acquired considerable property in the linen trade at Manchester, vast quantities of which article, were exported during the last war to the Continent, where Mr. Rothschild availed himself of the peculiar advantage of his brother's agency in that quarter of Europe. Previously to the close of the late war, Mr. Rothschild transferred the scene of commercial operations from Manchester to London. He then became a considerable speculator in the Foreign and British Securities on the Stock Exchange; and after the melancholy death of Mr. Goldsmidt, assumed a very prominent station in the money market. But the principal accident which contributed to the rapid elevation of our Modern Crœsus, was the escape of Buonaparte from Elba, in 1814.—In consequence of Mr. R.'s superior means of information on the Continent, this important occurrence was known to him nearly forty-eight hours before it was in the possession of any other person in this country. He did not fail to avail himself of every advantage which this priority of intelligence presented. His agents went into the market and sold prodigious quantities of stock. The consternation was dreadful! Every one suspected danger, none knew where to look for it. The panic was epidemic! On the disclosure of the fact, the general cry was *sauve qui peut*; and the object of our present article bore off the immense sum, gained by his success on this great and extraordinary occasion.

Mr. Rothschild, thus fortified in wealth, and enjoying at this time the almost exclusive means of acquiring the first intelligence from the Continent, soon established for himself a reputation and importance, the maturity of which can scarcely be said to have been accomplished at the present moment. He availed himself of a conjunction with his brothers, (who are also great capitalists on the Continent,) of the opportunity of administering to the wants of the King of Prussia, the Emperor of Russia, the Kings of Naples and Spain; the Republic of Columbia and other States, who negotiated loans on terms highly profitable to him; and which have, with the advantages of the courses of exchange, and other incidental benefits, realized immense sums in addition to his fortunate speculations in British Stock. But the great *coup de main* of Mr. R. consisted in his out-generalling the Gallic Financiers in the recent French Loan. In that transaction he is supposed to have cleared upwards of £100,000, by the commission alone, independent of the advantages of the courses of Exchange!

By the fortuitous occurrence of favourable circumstances, Mr. R. has been enabled to amass greater wealth, than any man that ever existed in England. It would be impossible for others to estimate his property, when Mr. R. has declared that he could not do it himself. It has been asserted, however, that he can command upwards of Fifteen Millions sterling at any time, if required! When it is considered that "money, the sinew of war," is in its amount illimitable, and in its control so much at the mere volition of Mr. R. it ceases to surprise the reader, that such a man should be necessary to the Potentates of Europe, and that his friendship and assistance should be no less anxiously sought, than promptly and powerfully afforded.

Mr. Rothschild is a Baron of the German empire, to the Emperor of which, he has rendered some essential services. He is about 43 years of age, and possesses a family of nine children. His mode of life is remarkable for its retired description. Unlike his great predecessor, (Goldsmidt,) he does not boast of his choice and exquisite wines, or herald his hospitality towards the Princes of the blood. His appearance is unostentatious: his deportment familiar; and his manners unaffected and affable. His conversational style on 'Change is rapid, acute, and discriminating. He carries about him no aristocratical feeling; neither does he affect a singularity, the common concomitant of extraordinary genius, and the impotence of mental pecuniary plenitude. His face is distinguished by a lack of that piercing intelligence, which lights up and animates the expressions of those proverbial for their acutenes; but there is a quickness in the eye, which denotes a lively and unremitting watchfulness of the mind, on every subject of general interest.

When engaged in conversation, Mr. R. usually dangles a bunch of keys in his right hand, and indulges a habit of abruptly turning from the object to whom he is speaking, and suddenly renewing the colloquy. He possesses a memory so remarkably retentive, and the powers of mental addition so copiously strong, that he effects all his immense calculations without the agency of pen or paper: and often at those times, when the din of business "gives note of preparation" for a "rise or fall." His genius is of that order, which often enables him to perceive the benefit or disadvantage of a proposition, before the parties have fully viewed the surface. His movements are characterised by profound judgment: his attack is no less able, than his retreat judicious.

Mr. Rothschild's private character is, we believe, as amiable as his public life is important. He diffuses his benevolence with judgment and liberality. When solicited to countenance an Institution with his name, he answers, "You know I never take a public part; if you want (as I suppose you do,) money; name the sum, and you shall have it; but don't make me look ostentatious or mean, by naming too large or too small a sum." His eleemosynary contributions are chiefly distributed amongst objects of the jewish persuasion; who have in many instances arrived at a state of opulence through his instrumentality. Such a liberality of disposition, and philanthropy of character, has divested envy of her deadly influence; and created for Mr. Rothschild, an imperishable reputation, which will descend with advantage to his family in after ages.

FOR THE AMERICAN FARMER.

FOUNDATION WALLS FOR MILLS.

In reply to some enquiries made in the American Farmer No. 27, on the subject of *securing the foundation of brick walls for mills*. The writer has not actually built any of that kind of material, but has often seen defects in the bad management of foundations of brick and stone both, by not laying them deep enough, more especially when the water wheel was placed close on the our side. It ought to be an universal rule to avoid placing the water wheel near to the main house walls; it should be distant enough to admit a safeguard wall between the water wheel and house, which will of course require a longer shaft.

Now, if the situation of ground will admit, I should prefer the placing the water wheel in the centre of the building; then you avoid any bad effect of water undermining any but the pit walls which are easily repaired, if any failure happened, they not being higher than the ground floor. I have built two stone mill houses with heavy walls, and one was 85 feet long, 35 wide, which gave ample room for the water passing through the centre and water pit, that received a 6½ feet water wheel having both ends of the shaft at liberty to receive cogwheels to communicate motion to any part of three stories, and the house is now fully occupied with machinery; my foundations being 4 feet base, heavy stone laid across the wall. I built another since, and had no reason to alter the plan of the former, but pursued it—the house was 55 feet long, and 45 wide; my walls 2 feet 6 inches, the first story, 2 feet the next, and 20 inches to the third, leaving an offset of 6 inches at each floor, to rest the ends of the main girders on, and to prevent any break in the walls: both of these mills are sound walls without a crack; the first has been built thirty years, the other twenty years, the former was burnt and rebuilt on the same walls.

Respecting brick walls, I have not had experience further than observation has given, except their duration in water—I once had a full experiment; the brick was hard and well burnt; as any one of the slightest observation must know, that slack burnt ones will absorb water, and burst to pieces the first of their freezing and thawing *afterwards*. Those were hard, well burnt to top the chimney of a sawmill; a great freshet about 4 years after moved my saw mill, so far as to cause it to be taken to pieces; we collected most of the brick, but some was buried under the gravel, so as not to be found until ten years after; they were hooked out, a lump of half a dozen sticking together, being a corner locked so together, as not to be readily broken, by lifting them up and dashing them on the ground, until some of the brick, to my astonishment broke, rather than leave the mortar, that had lain under water ten years—this proved that water had no effect on the mortar cement, after being first fairly dry.

I do not know of a better cement, than a due proportion of *good* sand and *good* lime well burnt, and well worked, and not to put in a very large portion of lime, leaving it to mellow in mass covered up with sand; if it should be a week or even a month all the better, then work it all over well.

Now as to the thickness, it ought to be governed by the size and dimension of the building; the base secured by heavy plank laid in the bottom two abreast, or flatted logs equally good, to give the wall an equal bearing; this will do for any common soil; if very soft, piling is the only remedy. It is the well securing the foundation that is of the first importance, no good is to be had from the extra thickness—I have seen a 3 feet wall of brick built to a large and powerful mill, becoming thinner, as it advanced up; I do not know the proportion.

I should think 24 inches up to the ground floor, then 20 inches the first story, and eighteen above, amply strong, and grout the walls at every layer, by pouring in mortar in a liquid state, this fills it solid, and it becomes as one solid mass—and I think less than that would do, except the house is designed for a great and uncommon burthen.—But seasoned timber is important; if green, they shrink and leave vacancies, and the walls depending on the wood, leaves a vacancy to settle one side of the wall more than the other.

C. K.

TO THE EDITOR OF THE AMERICAN FARMER.

MAKING WINE—PRACTICAL AND USEFUL FACTS.

Vineyard, near George-Town,
D. C. Sept. 30th, 1823.

DEAR SIR,

I have this day put the last barrel of wine of this vintage in my cellar—I have twenty-five barrels of the different kinds (the produce of about two acres,) viz:

9	barrels of Constantia,	containing	301	galls.
6	do. Tokay,	do.	202	do.
3	do. Bland Madeira,	do.	102	do.
5	do. of the above grapes mix'd	do.	158	do.
2	do. Worthington grape,	do.	64	do.
1	keg made of the Fox Grape, cultivated,		10	do.
		Total	837	galls.

of which about one seventh will be lees, &c.

The grapes did not ripen so well nor so equally this, as they did last year, and were upwards of two weeks later in ripening; and a great many more mildewed and rotted than usual, owing to the wet weather in August.

To answer a number of enquiries, of how much wine will a bushel of grapes produce? I had twenty-two bushels of the Constantia grapes picked, and in the bunches they weighed 45 lbs. the bushel, and when picked off the bunches, they measured 12½ bushels, and weighed sixty-six pounds the bushel—They were then bruised and put into a vat, and after the pulp and coloring matter was dissolved, (which took three days) the juice was drawn off from the bottom of the vat, and produced fifty four gallons of pure juice.—Then the skins and seeds were put to the press, and produced ten and a half gallons more; making on the whole sixty four and a half gallons of juice from twenty-two bushels of bunches of grapes—I then had twenty bushels of the Tokay grapes gathered, and in the bunches they weighed forty-four and a half pounds.—They were bruised and fermented one night, when there was forty-three gallons of pure juice drawn from them, and when they were submitted to the press, they produced sixteen gallons more; making in all fifty-nine gallons.—If the season had been drier, I suppose there would not have been so much juice in the grapes but it would have been richer—but I have no doubt on an average of years, the abovementioned grapes will produce *more* than two and a half gallons to the bushel of bunches.

About one third of all my Bland Madeira grapes became mildewed or otherwise perished—and it has been the worst year that I ever knew of for ripening grapes.

About eleven bushels of grapes in the bunches, on an average, made a barrel of wine—and an acre will on an average, make upwards of four hundred gallons.

I am, Dear Sir,
Very respectfully,
Your's &c.
JOHN ADLUM.

P. S.—As there were considerable quantities of grapes sold in the market, and otherwise disposed of and given away, I think I must have had near 300 bushels.

The Egyptian millet you sent me, grew upwards of 10 feet high, and has heads of more than 20 inches long, only one of which blossomed, and was destroyed last night by the frost.—The Senna grew very luxuriantly, being now more than seven feet high—the frost has not yet injured it—it is full of blossoms, and has some seed pods which I fear will not ripen, and as it appears to be an annual plant, will of course be lost.

J. A.

Cheap Method of making Blacking for Shoes.

Ivory-black, two ounces; brown sugar, one ounce and a half; and sweet oil, half a table-spoonful—Mix them well, and then gradually add half a pint of small beer.

From Memoirs of the Board of Agriculture of the State of New York.

ON THE NECESSITY OF CHANGING SEED.

[*From the Farmer's Magazine.*]

'Have you found it of service to change the seed 'of plants, from one soil or climate to another, 'and why?—From the almost universal adoption of the practice, it seems that experience 'has fully justified it. In the case of exotics, 'that do not arrive at perfection in an alien 'climate, it does not seem wonderful; but in 'the case of naturalized vegetables, I cannot 'explain it.'—*Bath Society Papers*

Sir—Not having access to a complete set of your useful work, I am not aware of what discussions it has furnished on the subject of the necessity of a change of seed in the cultivation of corn; but, as an endeavour, however humble, to fix the principles of that necessity, may at the approaching season not be uninteresting to farmers, I have taken the liberty of submitting what has occurred to me from an imperfect consideration of it.

I understand a belief in an *abstract* necessity for an occasional change of seed to be very generally entertained, and to be founded on a supposed repugnance between the soil of a farm and a succession of plants descended from a particular stock of seed. This antipathy is said to be a secret principle in the economy of plants; and those with whom I have conversed, unable to account for it, consider it sufficient to say, the soil tires of the plants, or the plants of the soil. In this, it appears to me, there is much delusion; for I hold that, *abstractedly*, there is no efficacy in, and therefore no necessity for a change of seed. The grounds of this opinion I shall endeavour to explain.

Without going into the never-to-be-determined question, What is the food of plants? I take it for granted, that each species of vegetable has its peculiar pabulum; and that this peculiar matter must exist in the soil in which the seed of that plant is sown, otherwise it will not be produced in a perfect state. If any particular species of vegetable be repeatedly cultivated in the same field, it may so exhaust its food in that soil, that the latter will become unfit to produce the plant in perfection; and other circumstances, such as the application of certain manures, may incapacitate a piece of land from carrying a particular species of plant to maturity. But, in this case, a mere change of seed will not prove a remedy. Something must be done to restore to the land the pabulum of the plant sought to be cultivated in it, otherwise a change of seed will prove of no avail. Again, I conceive that a plant, after being deteriorated, by unfitness of soil, inadequacy of climate, or faulty cultivation, may be restored, by being transferred to better soil, or a more genial climate, or by being more carefully cultivated. But this is no proof of an abstract efficacy in a change of seed. Here there is a concomitant change of circumstances, which plainly accounts for the improvement: for we are entitled to hold, that corn, once degenerated, cannot be reproduced in a more vigorous state, unless it be transferred to land different in the circumstances either of climate, soil, or mode of cultivation. Still further, corn crops may degenerate by the gradual operation of an unfavourable climate, or by the natural barrenness of the soil in which they are raised. In such a case, the farmer finds an advantage in having recourse to fresh seed, the produce of a more genial climate or better land, or even of a neighbouring farm under the same circumstances of soil and climate as his own, if the corn produced on that farm, from being more nearly related to a good stock of seed, happens to be less degenerated. This, however, does not furnish evidence of an abstract efficacy in a change of seed; for it is clear, that the farmer would not have bettered his circumstances had he not obtained seed of a quality superior to what was produced on his own farm. Again, we know that crops may become deteriorated, by the adoption of the too general practice of sowing corn nearly as it grows, using little pains to separate the good seeds from weak and imperfect ones; or by a faulty rotation, or by many other circumstances of mismanagement. In such a case, it may be a temporary improvement to obtain a fresh supply of seed. But this does not establish the abstract efficacy of a change; for still the improvement depends solely on the farmer having selected seed of a quality better than his own, otherwise it would be absurd to suppose that his crops could have been meliorated by a change. In short, in every supposable case of change of seed, any improvement that takes place must be the effect of some concomitant change of obvious circumstances; and the necessity of the change seems to have no relation to the *je ne sais quoi*, that mysterious antipathy between the soil and a particular race of plants, which is said to be excited by their long familiarity. This is the abstract necessity of which I presume to dispute the existence; maintaining, that there is no necessity for "changing the seed of plants from one soil or climate to another," unless in the case of a degeneracy of crops, from some of the obvious causes I have alluded to; and in such a case, an improvement can be effected only by obtaining a supply of *better seed* This, too, is the only case in which there can be any *efficacy* in a change, except the object be to obtain a better *variety* of a particular plant than what is already possessed. With this view, it may be justifiable to sow seed, though even inferior, *as a sample*, to what is already produced on the farm, if superiority of soil, climate, or cultivation, afford a reasonable prospect of improving the *quality* of the new variety.

I am quite aware of the nicety of this question, and sensibile of my own incompetency to the discussion of it; but I shall think I have done enough, if some of your enlightened correspondents should be induced, from what I have said, to edify us with their sentiments. Xn.

Stonehaven, 3d January, 1820.

Editorial Correspondence.

TO KILL INSECTS WHICH ATTACK FRUIT TREES.

Springfield, 4th October, 1823.

So many complaints prevail about the insects that injure fruit trees, and particularly the peach, that I take the liberty to ask an idle corner for the following application, which is believed to be very efficacious. Let one drachm of corrosive sublimate be dissolved in a gill of gin, and diluted with four quarts of soft water, then apply the mixture with a paint brush, it does no injury to the trees, but effectually destroys all the vermin.

J. S. Skinner, Esq.

PYROLIGNEOUS ACID.

Extract of a letter from a correspondent dated
Morganton, 12th September, 1823.

"Will some of your correspondents have the goodness to give us the method of preparing the Pyroligneous acid, whether by saturation, by distillation, or in what way,—the kind of wood that yields it in the greatest quantity?"

From "Experiments in Chemistry."

To prevent Beer from growing flat.

Put into a cask, containing eighteen gallons, a pint of ground malt, suspended in a bag, and close the bung perfectly; the beer will be improved during the whole time of drawing it for use.

To recover Beer when sour.

When beer is become sour, add some oyster shells, calcined to whiteness, or a little powdered chalk. Either of these will correct the acidity, and will make it brisk and sparkling. It should be drank almost immediately afterwards. Some use salt of tartar.

To bottle Porter.

It has been supposed by many persons, that in bottling porter there is some preparation made use of not generally understood: readers may rest assured, that nothing more is necessary to produce good bottled porter, than attention to the following rules:

Let the bottles be clean washed and drained dry--the corks sound and good, for this is essential. Fill the bottles on one day, and let them stand open till the next: this will bring the beer to a proper flatness, and prevent the corks from flying, or the bottles from bursting. Let the bottles be corked as close as possible.

These rules will apply equally well to the bottling of ales.

Cheap and wholsome Table Beer.

To four pounds of coarse brown sugar, add ten gallons of water, then put in three ounces of hops, and let the whole boil for three-quarters of an hour, and work it as usual. It should be kept a week or ten days before it is tapped, when it will improve daily afterwards, within a moderate time of consumption.

Another method, and for a smaller quantity, is, to put a pound of treacle to eight quarts of boiling water; add two bay-leaves, and a quarter of an ounce of Ginger in powder. Boil the whole for fifteen minutes, then let it become cool and work it with yeast.

Ginger Beer.

To every gallon of spring water add one ounce of sliced white ginger, one pound of common loaf sugar, and two ounces of lemon juice; boil the mixture nearly an hour, and take off the scum; then run it through a hair sieve into a tub, and when cool (viz. at 70°) add yeast in the proportion of half a pint to nine gallons; keep it in a temperate situation two days, during which it may be stirred six or eight times; then put it into a cask, which must be kept full, and the yeast taken off at the bung-hole with a spoon.—In a fortnight, add half a pint of fining (isinglass picked and steeped in beer) to nine gallons, which will, if it has been properly fermented, clear it by ascent. The cask must be kept full, and the rising particles taken off at the bung-hole.—When fine (which may be expected in twenty-four hours) bottle it, cork it well, and in summer it will be ripe and fit do drink in a fortnight.

Preparation of Yeast.

It has been mentioned before, that yeast is the barm or froth which rises in Beer, and other Malt-liquors during a state of fermentation. When thrown up by one quantity of Malt or Vinous liquid, it may be preserved to be put into another, at a future period; on which it will exert a similar fermentative action Yeast is likewise used in the making of bread, which without such an addition would be heavy and unwholesome.

It has a vinous, sour odour; a bitter taste, arising from the hops in the malt liquor; and it reddens the vegetable blues. When it is filtered, a matter remains which possesses properties similar to vegetable gluten; by this separation the Yeast loses the property of exciting fermentation, but recovers it again when the gluten is added. The addition of Yeast to any vegetable substance, containing saccharine matter, excites fermentation by generating a quantity of Carbonic Acid-Gas. This very useful substance cannot be always procured conveniently from malt-liquor for baking and brewing; the following methods will be found useful for its extemporaneous preparation.

Mix two quarts of soft water with wheat flour, to the consistence of thick gruel, boil it gently for half an hour, and when almost cold, stir into it half a pound of sugar and four spoonfuls of good yeast. Put the whole into a large jug, or earthen vessel, with a narrow top, and place it before the fire, so that it may, by a moderate heat, ferment. The fermentation will throw up a thin liquor, which pour off and throw away; keep the remainder for use (in a cool place) in a bottle, or jug tied over. The same quantity of this, as of common yeast, will suffice to bake or brew with. Four spoonfuls of this yeast will make a fresh quantity as before, and the stock may be always kept up, by fermenting the new with the remainder of the former quantity.

Permanent Ink for Marking Linen.

This useful Ink is composed of Nitrate of Silver (Lunar Caustic;) and Tincture, or Infusion of Galls; in the proportions of one dram of the former in a dry state, to two drams of the latter. The Linen, Cotton, or other fabric, must be first wetted with the following liquid, viz. Salt of Tartar, one ounce, dissolved in one ounce and a half of Water; and must be perfectly dry before any attempt is made to write upon it.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 10, 1823.

The Editor of the American Farmer, well aware of the taste and patriotism of the ladies of the Eastern Shore of Maryland, and how materially and honorably they contribute, by their notable housewifery and good management, to the comfort and independence of their families, begs leave respectfully, to present to them his respects, and to offer his services, to show for them such articles of househould manufacture, as they may wish to send for premium, to the next Maryland Agricultural exhibition, to be held near Baltimore, on the 5th of November—to explain what he wishes to be understood by this tender of his services.—It may happen that ladies may have prepared or manufactured, certain commodities, and have difficulty in sending them for want of some one, to take charge of and attend to them—what we mean then, is, that if in all such cases they will have them carefully put up and labelled, and sent by Capt. Vickers, of the steam boat, addressed to the Editor of this paper, he will cause them to be taken out and fairly exhibited, and either sold, if the owner so wish, or safely returned by the same conveyance. Premiums awarded for any such articles, will be received and carefully deposited with Capt. Vickers.

SUPERIOR WHITE WHEAT AND OATS.

Messrs. Haven & Smith of Philadelphia, have rendered a very acceptable service to the Agricultural community by the importation of white wheat and oats, both of *very superior quality*, from Rotterdam. Farmers and millers, are invited to call at the office of the American Farmer, where samples of each may be seen, and will be much admired.—Messrs. Hammond & Newman, of this city, will have a few bushels of the wheat for sale, and farmers in the white wheat district, on the Eastern Shore of Maryland, ought to secure some of it for seed, by way of experiment. In Philadelphia, the wheat is held at $2, and the oats at 75 cents per bushel.

VERY FINE RACING EXPECTED.

The association formed in this city for the improvement of the breed of that noble animal, the horse, have proceeded with great spirit and directness to their object. Subscriptions already made, have warranted the Club, in offering very liberal purses for three days racing, to commence on Tuesday the 22d of this month. The sum to be run for on Thursday, is ONE THOUSAND DOLLARS, and will doubtless bring upon the turf, the swiftest coursers of Virginia and other States.

Some good citizens object to racing altogether, while others deprecate with too much reason, the *manner* in which they are often conducted, as being promotive of gaming and other species of dissipation. Those therefore who take pleasure in the sports of the turf, as a source of manly and rational amusement, and as the only effective means of preserving the blood horse in his purity, have long desired to see these sports revived, with such precautionary arrangements and guarantees, as will replace them on the most respectable footing, and preclude from the course, every thing offensive to the eye or ear of the most scrupulous. This we trust in regard to the Baltimore races, has been fully accomplished; such at least is the hope and the intention of the gentlemen now associated, who will use every possible effort to justify the expectation, which their names have excited, and they ask and expect the co-operation of all those of their fellow citizens, who take an interest in the character of the city, and in the particular objects of the society.

DESTRUCTION OF THE TOBACCO CROP BY FROST.

Extract of a letter from one of the most opulent and judicious Planters in Prince George's County, to the Editor of the American Farmer, dated 30th September, 1823.

Last night we had, quite unexpectedly, a severe frost. I think I speak within bounds, when I say it has destroyed at least one half of the present crop of tobacco in Prince George's—which you know to be a large proportion of the tobacco made in the State of Maryland. If we have suffered so considerably here, in the upper counties they must have suffered still more severely. I have before seen considerable loss by frost, but nothing like the present—yesterday the forepart of the day was quite mild, and about 12 o'clock, in the field, the shade was quite agreeable; nor did it turn cool till towards night, when the wind was from the North-West; and after night it blew a gale, and continued so for some hours. The frost this morning astonished me, and I have no doubt did others; indeed, it stole on us as a thief in the night.—Mr. Hogoverth and Mr John H Hodges, of your city, were with me yesterday, would lodge somewhere in the neighborhood of Upper Marlborough, and I have no doubt have seen enough this morning, and on their return today to Baltimore, will confirm what I have said. You may rely on the devastation being greater than you can have any idea of, remaining, as you do, in a city so closely built, you would not feel it.

All the accounts, of which we have many from different quarters, go to shew the loss of one half the crop. The peculiarities of the season had kept the tobacco in a growing state, and prevented it from ripening, to a later period than usual,—and the frost being earlier, and for a few hours very severe, the calamity has been heavy and extensive. It is a fact too, that a much greater number of houses filled with tobacco, have been burned, than ever were in one season before, and this is ascribed to the great desire to give their tobacco the highest possible color, to which the planters have been prompted by the great difference now made between dull and bright, and the very high prices at which the latter has been sold. —Firing, to be effectual, is at all times a dangerous process, and in pushing it too far, there has been a great number of houses burned.

Edit. Am. Farmer.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard street, from wagons, $7—fine do. $6 50—Wharf, do. $6 to $6 25, do. do. $6 cash—White wheat, $1 20 to 1 30—Red do. $1 10 to $1 15, for Maryland, and $1 to $1 09 for Virginia—Rye. 44 to 45 cents—Corn, 36 to 38 cents—wharf Oats, 27 a 30 cts.—wagon Oats, 31 cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50, per cwt.—Bacon, hog round, $10—Pork, $7 50 per c. lb., 6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, retail, $1 50, cargo price, 1 12½—Peas, retail, 75 a 80 cts., cargo price 58 a 60 cts. —Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 30 cents per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl., No. 2, $2 37½—Fine Salt, 75 cents per bush., coarse, do. 70—Butter, (firkin) 14 cts. per lb.—Eggs, 12½ cts. per doz.—New Hay, $15 per ton, old do $16—Straw, $9.

MARYLAND TOBACCO.—As last report, except the inferior qualities, which may be quoted from 50 cents to $1, higher in demand.

University of Maryland.

THE MEDICAL LECTURES will commence as usual, on the last MONDAY of October next.

Surgery,	*John B. Davidge, M. D.*
Chemistry,	*Elisha De Butts, M. D.*
Practice of Physic,	*Nathaniel Potter, M. D.*
Anatomy,	*Granville Sharp Pattison, M. D.*
Materia Medica,	*Samuel Baker, M. D.*
Institutes of Physic,	*Maxwell McDowell, M. D.*
Midwifery,	*Richard W Hall, M. D.*

As the Infirmary attached to the University will be finished before the last week of October, the Clinical Lectures on Medicine and Surgery, will commence the first week of the session.

ELISHA DE BUTTS,
Dean of the Medical Faculty.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

From Memoirs of the Board of Agriculture of the State of New York.]

ON PRUNING OF ORCHARDS.

[*From* Coxe *on Fruit Trees.*]

There is no branch of the management of orchards less understood, or more unskilfully performed, than the operation of pruning; a belief of its necessity is so general, that even the most careless will seldom omit it—such however, is the want of skill in many of the operators, that total neglect would be less prejudicial, than their performance of it. If judiciously done, pruning promotes health and early fruitfulness: and will continue a tree in vigor, long after the common period of its duration. Nothing has contributed more to the imperfect knowledge of this operation, than the wordy and unintelligible systems which have been published respecting it; in a mere practical system, it is unnecessary to lay much stress on *wood branches* and *fruit branches*; which, however well understood by an observing intelligent gardener, can scarcely he comprehended by the labourer, employed in the business of pruning an orchard—from the rapidity of vegetation, which is generally ascribed to the nature of our climate, excessive pruning is very apt to generate an infinite number of suckers from the limbs of apple trees; which, if suffered to grow are more injurious to the production of fruit, than the woody branches which are removed; our great heat, and dry atmosphere, render close pruning less necessary here than in England, whence we derive most of our instruction on this point. A good general rule is, never to shorten the branches, unless to improve the figure of the tree; and then to take them off at the separation, very close, so that the wound may heal well and soon: the branches should shoot as much as possible in increasing distances, as they proceed from the common centre, inclining a little upwards, by which means the sap will be more evenly impelled, and better distributed; the ranges should not approach too near to each other; for the admission of the rays of the sun is necessary to the production and perfect maturity of fine flavoured fruit—in cutting off a branch, it should be done as close as possible, never leaving a stump, for the bark cannot grow over it, and disease in the wood will inevitably follow. If the wound produced by the separation be very large, cover it with tar, or thick paint; if small, fresh cow dung will be the best plaster: I have healed very large wounds from the gnawing of calves, horses, and sheep, by a liberal application of this plaster, secured by a bandage of paper or linen.

When trees are much pruned they are apt to throw out numerous suckers from the boughs in the following summer; these should be rubbed off when they first appear, or they may be easily broken off while young and brittle—cutting is apt to increase their number. Trees differ much in their form, and require very different treatment in pruning; it may not be necessary in our warm climate to trim quite so close as in England, but great care should be observed to take off every limb which crosses another, or is likely so to do at a future time; those who can conveniently do it, will find a benefit from forming the heads of their trees in the nursery, the year before they remove them—when transplanted, they will thrive more rapidly from not having been pruned, at the time of removal, which in some measure exhausts and weakens the tree; I have been latterly in the habit of giving the principal pruning to my orchards, after they have been planted out about five or six years; their growth, with proper cultivation is then so vigorous, as to permit any natural defects in their forms to be corrected with safety, by free pruning, and forming their branches; the peculiarity of growth which characterizes each kind, is then visible, and uniformity of shape may be more easily attained.

Apple trees should be so formed, as to allow a man and horse to pass under them in ploughing; this elevation of the branches, while it protects them from cattle, opens the ground to the salutary influence of the sun, on the crops of grain and grass.

No error is more universal, than an anxiety for early productiveness in an orchard; it is generally obtained at the expense of much eventual profit, and by a great diminution of the size and vigor of the trees; believing early fecundity to be injurious to the vigor and perfection of plants, I am always attentive to pluck from the trees these evidences of early maturity, in the first stages of their existence.

It was a common practice, some years since, to apply Mr. Forsyth's celebrated composition to large wounds produced by pruning; that novelty like many others, had its day among us; and has finally lost its popularity, from a general belief of its inefficacy—Mr. Forsyth, at a later period, announced as a new discovery, what had been long known in this part of our country; that an application of cow dung and urine, was more efficacious in healing the wounds of trees than his plaster, even in the moist climate of England: In America our winter frosts decompose it, and our summer heats dry it up so completely, as to render it useless for the purposes intended.

* * *

FROM THE SAME.

ON THE MANAGEMENT OF COWS.

By Russell Woodward, *of Suffolk.*

Having formerly kept a large number of cows, I observed many amongst them that dried up their milk so early in the fall, that they were not profitable, while others, with the same keeping, gave milk in plenty until late in the season. I likewise have often heard my neighbors observe, that some of their cows, though very good in the fore part of the season, dried up of their milk so early, that they were unprofitable, and they should have to put them off; I accordingly found it expedient to find out the cause, if possible: and when I brought to mind the ways that some of my young cows had been kept and milked, I attributed the cause to the milking of them the first season they gave milk; and by many experiments since, I have found that young cows, the first year they give milk, may be made, with careful milking and good keeping, to give milk almost any length of time required, say from the first of May to the first of February following, and will give milk late always after, with careful milking. But if they are let to dry up of their milk early in the fall, they will be sure to dry up their milk each proceeding year, if they have a calf near the same season of the year; and nothing but extraordinary keeping will prevent it, and that but for a short time. I have had them dried up of their milk in August, and could not by any means make them give milk much past that time in any proceeding year. In 1820, I had two heifers, which had calves in April, and after getting them gentle, I set a boy to milk them for the season, (which is often done the first season, on account of their having small teats:) he was careless, and dried them both off in August. Although I felt satisfied I should lose the greater part of the profit of them afterwards yet I took it upon me the following year to milk them myself, and give them good feed, but to no purpose. I could not make them give milk much past the same time they dried the year before. I have two cows now that were milked the first year they had calves, until near the time of their calving again, and have continued to give milk as late ever since, if we will milk them.

* * *

FOR THE AMERICAN FARMER.

THE IRRIGATOR.

Charleston September 10, 1823.

Dear Sir,

The notice that has been taken of the irrigator, by the Editor of that valuable respository of agricultural information, the American Farmer, in consequence of your communication to him—calls for an acknowledgment on my part, of his liberality and friendly disposition towards individual research and industry—and of your flattering attentions on the occasion, which I must be allowed to impute, more to the public spirit, which animates your exertions in the cause of agricultural improvements, than to any claim that I would otherwise have on them. It is with reluctance that I trouble you again on the same subject; but as the irrigator has attracted the notice of several gentlemen, pro and con, and as the faults and deficiences of the machine, ought not to be laid at your door, it seems but just and proper, that I should give the reasons, which led to the construction of it. Believing that salt-water, particularly if made very muddy, would be a valuable acquisition to planters and farmers on the sea board, if it could be got on the land, in such quantity, and at such an expense, as to gain time, save labour, and not to interfere with the general modes, or rules of planting—I began to turn the thing in my mind. Several plans presented themselves, and among others, a carriage with wheels and a box or cask; but as our farms and plantations are generally cultivated, to wit—on beds or ridges, from four to eight feet apart, and the great desideratum, was to get a machine that would run through the alleys, without injury to the growth on the beds or ridges, and which would be used at all times of the year—I soon found that no box or cask, could be used on wheels, without being reduced to so small a size, as to defeat the original design; inasmuch as the multiplicity of turns which so small a machine would have to make, to carry out the requisite quantity of water for an acre of ground, would take up so much time, and would require so much additional labor, as to render it unwise and imprudent, to resort to this mode in preference, to the ways and means hitherto resorted to, to manure land. It was evident also, that if even it was constructed upon a scale of seven feet wide—(the only dimensions that I conceive, could really render it beneficial,) and supposing the alleys to be eight feet wide, there would be great danger of the wheels destroying the plants on the beds, or of their so compressing or binding the earth around them, that it would be better to dispense with the watering, than to risk the destruction of the previous labour. Hence, I concluded to try the cask in the manner in which it was represented to you, in the draft; and finally adopted it, as the most eligible mode, of realizing the principle of œconomy, which ought never to be lost sight of in matters of experiment, and of gaining the end proposed by the labour. I beg leave to notice the following, as some of the advantages of the *cask on felloes*, over a *cask on wheels.* If the alleys are no more than five feet wide, a hogshead four feet long, can discharge its contents from both heads as it revolves, (which was the original intention,) without injuring any thing on the beds, or the beds themselves, while they would be watered, or manured if you please, on each side, leaving the alleys, where the felloes run, to absorb the surplus water, keeping the earth mellow, and in a state to be profitable when hauled up to the plants—a cask on felloes, can be, at very little expense, and with very little trouble, brought immediately into use, can be employed in any stage of the crop, provided the beds are five feet apart, saves time, and considerable labour, both to man and beast—the œconomy of the thing alone, is obvious, in regard to the difference between the cost of a pair of wheels and a hogshead. Another reason in favour of the felloes, is that at every revolution of the cask, the water itself, taking the direction of the moving power becomes a considerable *impellent*, from its motion and weight against the cask, as long as there is any water in it. I presume it will not be denied, that a weight raised, though no more than four feet from the earth, is more likely in consequence of that very elevation *on wheels*, to make a greater resistance, and to have a more direct tendency to sink them deeper in soft ground, than if the same weight was running on the ground on its own axis, or so near the ground as to be influenced by *every jostle*, which it is liable to experience, from uneven ground. It is an acknowledged principle, that the farther any body is removed from the point to which it is attracted by the force of gravity, the greater will be its progressive velocity in its descent, according to its space, through which it has to pass; of course, the greater will be its pressure, wherever it falls or rests—this ought to give the felloes a preference over wheels—as well, because *they* have *no friction*—" as because there are no bodies sliding one over another, which, is proportionate *to the weight laid upon them*; and as friction not only depends upon the moving bodies, but on the irregularities on the surfaces, upon which they move," but it is not necessary to my purpose, that I should enter into a discussion of this kind. I am satisfied with the few hints, that have been given, by Mr. Gideon Davis and Mr. John D. Craig, who I am pleased to find, are favourably impressed with the practicable operations of the machine. It is clear to my mind, that felloes cannot be subject to as many difficulties and inconveniences as wheels; for if owing to the softness of the ground, the felloes should sink to their whole depth, (an extreme case,) still the cask, bearing then its own weight, would ease the draft, by running on its own surface, and would relieve the felloes, without having the constant effect, (now not wanted) of the roller.

The idea suggested by Mr. John D. Craig, respecting *small staves*, agrees with my own view of the case, when the machine is intended to be used as a roller, as well as for watering; but in that case a cask without felloes had better be resorted to, and to avoid any difficulty with regard to the bung, a tapering plug could be used; since however hard it might be forced in, it could easily be started, when wanted to be drawn to fill the cask: this kind of stopper for the bung hole, I would recommend at all times. I cannot conceive, nevertheless, that those staves, could be often wanted, for although the ground might be soft, there can be no reason to apprehend, that the felloes, with a face or tread of six *or nine inches*, would ever sink to any thing like the depth, to which a wheel would go. In addition to the weight of the wheels themselves, and the carriage, the very *elevation* of the cask, would, at every *surge or jostle*, and by *its weight*, force the wheels deeper into the earth, than the same weight, running on its own axis, and liable to no such effects, could possibly sink *a pair of felloes*, standing not more than two feet apart.

Upon the whole I think, that whether on the score of œconomy, practicability, or usefulness—the cask on felloes, is the least complex, the least subject to be put out of order, and the most at the command of every planter or farmer. I could have made additions to it—but whether they would have been improvements, is questionable; they certainly would have increased the expense, and it was an object to avoid that —for instance, I might have recommended that a spout, such as is attached to a watering pot of the largest size, should be fixed in each head of the cask, and of such length and diameter as to allow full play to the shafts on the axle. This would have answered the purpose of the *box with holes*, but this would have been expensive, liable to repairs, not easily made, without any real solid advantage; because the main object, is to get the water on the land at the least expense, the most expedition, and the least trouble: and if this can be effected by a spigot and faucet, a plug, or otherwise, it was immaterial, the mode least liable to casualties was the best; I therefore adopted the plug, (which if lost could be easily replaced on the spot,) as being less objectionable, than a box with holes, or the spout of a watering pot: besides, it did not strike me, that any injury would arise from the water being discharged through a plug hole; nor that any special benefit would arise from its being scattered like rain. Such however, as the irrigator is, such it must remain for the present. If it turns out to be of any public utility, I shall be gratified. 'Tis certain that no one inclined to give it a fair trial, can ever have cause to regret his having made the experiment on the score of costs.—Excuse my trespassing so long on your time and patience. I thought it due to your politeness, to furnish you with my view, in originating the draft of the machine in question, and at the same time, to make you my acknowledgments for the trouble you have taken on the occasion. Should you deem any thing that I have said, worthy of being adverted to, I will thank you to do so under any name but my own, as it still is my wish not to appear "*in print*."

Very respectfully,
Your's obedient,
C. R. C.

Charles E. Rowand, Esq.

* * *

FROM THE NATIONAL GAZETTE.

Mr. Editor,

A paragraph upon the subject of Silk Worms in your paper of the 7th inst. taken from the New York Merchantile Advertiser, appears to be going the rounds in all our city papers. What I allude to is this—

"The beautiful piece of silk, wrought by Silk worms in the factory of Mr. Bottom, at Lisbon, Connecticut, recently described in the papers, has been brought to this city, and was purchased by Mr. Scudder, to be placed in his Museum. The gentleman who exhibited it to us, states, that it was worked on a rough piece of board about three and a half feet long and varying in width from five to six inches, the piece being shaped precisely to the surface of the board, and having a border or selvage which resembles gold embroidery. The board was accidentally lying on a shelf where the worms, twenty-five in number, were placed, and upon which in three days time, they unwound themselves so as to form this elegant fabric, surpassing in texture any thing ever produced from the loom. Immediately after completing this work, the worms all died.

N. Y. Mer. Adv.

Last summer I reared some silk worms from the eggs, of the finest kind, which I brought from the South of Europe, and after they had completed their spinning, and I succeeded with a little management in winding off *entire* many of the best I could select for the purpose, and found that, upon an average, each produced about 300 yards, finer than any human hair. But Miss Rhodes, in her communication to the Society for Arts and Manufactures, states, that she had taken from a single worm 404 yards. Now supposing that lady's number to be correct, and that the *twenty five* worms that wrought the silk in the factory of Mr. B. produced each four hundred and four yards, which would be ten thousand one hundred yards; is it possible, Mr. Editor, that that number of yards would cover a surface of three and a half feet long, and five to six inches wide? I cannot believe it! That a number of worms, but a greater number than *twenty-five*, put on a "rough board" of the above dimensions, to spin, will cover the surface, I can readily believe. The most costly fans in China, are made by silk worms in somewhat a similar manner. The wonder therefore manifested in the New York Merchantile Advertiser, that silk worms should produce their silk on a "rough board" when not better provided, is I conceive no wonder at all."—"The worms" say the Editors, "*unwound themselves so as to form this elegant fabric.*" What is meant by this, I know not. And who ever before heard of silk worms unwinding the silk which is spun from their *mouth*. If there had been obstructions at the edges of the "rough board," the worms would have enveloped themselves in their silk and formed what is termed a cocoon, in which a transformation takes place, and the worm becomes an aurelia or chrysalis; nor is it at all surprising, on the contrary, extremely natural, that the worms immediately after completing their work, should all have died, when destitute of their sik or cocoon. I would send the Editors of the New York Merchantile Advertiser, a few cocoons, and some silk worms' eggs, for their curiosity:—At the same time supply them or their friends, with any quantity of Murdoch, Yuille, Wardrop & Co's. fine *Madeira Wine.*

SAMUEL ALEXANDER.

No. 50, South Wharves,
Philadephia.

* * *

FROM THE BOSTON RECORDER.

LIGHTNING RODS.

Mr. Willis—I see in the Recorder frequent accounts of damage done to buildings, and lives lost, by lightning; and also frequent recommendations to the people to secure their buildings by proper conductors. All this is very well; but people will never be persuaded to erect Lightning Rods, till they are in some measure convinced of their utility. The popular opinion is, that a conductor for lightning, instead of security against, only serves to invite the bolt; and that there are more buildings injured by lightning that have conductors, than there are that have not, in proportion to the whole: and this opinion is probably not altogether ill founded.

I have for several years been in the habit of examining all the conductors I conveniently could, and I find the greater part of them very deficient in one way or another.

The greatest deficiency I have noticed is in the want of a free communication with moist earth. When a rod is in all other respects perfect, and deficient in this, so far from being a safeguard, it only increases the danger it was intended to avert.

I have known, and by good authority have heard of several buildings, having conductors, but which did hardly touch the earth, being damaged by lightning. Among the many is the meeting house in Reading, Massachusetts. In the course of the present summer the lightning came down the rod, and went off near the bottom, into and damaged the house. This was undoubtedly because, by reason of the rod not going more than two inches into the ground, the elecçtrical fluid could not pass off as fast as it was received, and the rod became overcharged.

Lightning rods are generally made and put up by persons wholly unacquainted with the principles of electricity, and what is necessary to constitute a safe conductor.

I shall, therefore, endeavor to give some directions for the information of those who are unacquainted with the subject, and who have not the means of information.

The rod should be made of round, smooth iron, at least three quarters of an inch in diameter, and when it can conveniently be done, instead of linking, should be smoothly welded together; but when by reason of its length or otherwise it is inconvenient to weld the whole rod, let it be smoothly connected, by screwing the end of one part into the end of another.—There should be five or more points, one in the centre, perpendicular, and the other oblique.—They should be filed to a sharp, slender point, and tipped with silver. The points should be elevated at least five or six feet above the highest part of the building. The bottom of the rod should go into the earth six or seven feet, and terminate in a bed of two or three bushels of wet charcoal. The wet coal covered with earth will probably retain dampness longer than any other substance.

A conductor constructed and put up agreeably to the above directions, will perfectly secure a building for twenty feet on every side. When a building is more than forty feet long, for perfect security, there should be two or more rods, calculating one rod for every forty feet.

The whole expense of one rod for a two story building, including the silvering the points will not exceed $50.

* * *

We do not recollect, says the editor of the National Gazette, to have read of any *Water Spout*, so destructive as the one described in the following article, which we have translated from the Paris Journal des Debats, of the 30th of August.

" *To the Editor of the Journal des Debats.*

" Sir—A meteor extraordinary for its violence, rapid movement, and injurious effect, has just spread alarm and desolation in several parts of the district *Dieux et Mantes*. On the 26th August, about 3 o'clock, P. M. the great heat of the atmosphere produced a storm which took the direction, from the south west, towards the village of Boncourt ; not far from this place, there appeared, suddenly, a water spout of extraordinary dimensions, whose broad base rested upon the ground, while its top was lost in the clouds: it appeared to consist of a thick and black vapour, in the centre of which flames were frequently perceived in several directions. Moving impetuously with the storm, through the upper vallies and over the mountains, it uprooted or dashed down, in the compass of a league, seven or eight hundred trees of different sizes; and, in reaching the village of Marchefray, demolished in an instant one half of its houses. The walls shaken to their foundations, fell in on every side, and the ruins were scattered to the distance of half a league, before the ærial torrent. Some of the inhabitants who remained in the villages were crushed or wounded by the fall of the houses: those who were working in the fields (luckily the greater number) were thrown down or borne along by the whirlpool, that destroyed at the same time the harvest and the cattle. It discharged hail as large as the fist, stones, and other foreign bodies, which struck some persons and caused severe contusions. Wagons heavily laden were dashed in pieces ; wheels of the largest size, torn off, were found at the distance of three or four hundred feet from the places in which they were struck. One heavy vehicle was carried upon a tile kiln, which was razed. A steeple, several hamlets, a number of detached houses, some new walls, were tumbled down and other villages than those mentioned, suffered considerably. To judge from the devastation which it spread, this waterspout must have been about six hundred feet diameter at the base. It has deprived a multitude of individuals of their means of subsistence.

" FOURSALT."

Selections.

THE USEFUL ARTS.—BLEACHING.

The art of bleaching is of great antiquity.—The ancients were acquainted with the detersive quality of some kinds of clay, and the effects produced by the action of the atmosphere, moisture, and light, on the stuffs exposed to them. Health and cleanliness rendered it necessary to devise quicker methods than these ; and the properties of soaps, and leys of wood-ashes were therefore soon discovered.

In the present age, the arts have taken advantage of processes and detersive menstrua, the existence of which, was before unknown ; these discoveries have succeeded each other with such rapidity, that the last twenty years have effected a complete revolution in the art of bleaching.

This art is naturally divided into two distinct branches ; the bleaching of vegetable and of animal substances. These being of very different natures, require different processes for whitening them. Vegetables consist of Oxygen, Hydrogen, and Carbon, of which the latter is in the greatest proportion ; while animal substances, besides these contain also a large quantity of Azote, and also Phosphorous and Sulphur.

Bleaching of Flax and Hemp.

If ripe flax is examined, it will be found to be composed of fibres or filaments united together by the sap, enveloping a semi-ligneous substance, and covered by a thin bark. It is the fibrous part only that is used for making cloth, and it must therefore be previously separated from the other matters.

The sap, or succulent part, is composed of extractive principle and water, and the first process is to separate this substance, which holds the filaments together. As soon as the flax is pulled, it is steeped in soft water until the putrefactive fermentation takes place. This degree of fermentation begins with the succulent part, as being more susceptible of decomposition than the rest. Was the flax to be continued long in this state the whole substance of it would be decomposed or destroyed : upon the same principle that malt is injured by too long steeping, or that wort loses its substance by too long a fermentation. It must therefore be taken out of the water while yet green, and before the whole of its sap is separated. Well-water, and brackish water, must be carefully avoided, as well as that which flows over a gypseous soil. Such waters accelerate putrefaction, and hurt the quality of the hemp and flax.

The flax when taken from the water, is spread out upon the grass to dry. During the fermentation and decomposition which thence result, there is a speedy combination of oxygen and carbon. Exposure on the grass facilitates the escape of the carbonic acid into the atmosphere, and the plants become of a whitish grey color.

It is known that a ley, very slightly alkaline, may be substituted with advantage, for this long and noxious operation: it is therefore certain, that a chamber from twenty to thirty feet in length, into which the steam of alkaline caustic water, (of the strength of one fourth of a degree only,) is introduced, will be sufficient to produce the same effect as watering on an immense quantity of hemp and flax, suspended on basket-work ; and that, too, in less time, and with less expense, than are required from the different manipulations of watering. The losses occasioned by the negligence of workmen, who by suffering the hemp and flax to macerate too long, give time to the decomposition to reach the filaments, which renders them brittle, and occasions a considerable waste, will also be avoided. In this process, the artist can follow every moment the progress of his operation, and stop it at the favorable period.

Nothing now remains but the wood, and the flax or fibrous part. The wood is a hollow tube covered over very compactly with the flax.

To separate the wood, it must be kiln-dried, in order to render it frangible or brittle ; but care must be taken not to apply too much heat, for fear of injuring the flax.

It is next to be beaten or broken, by which means the flax is not only divided into small fibres, but most of the wood is separated, and the part which adheres is reduced to small fragments. To separate these again, the flax is to be threshed, in small parcels at a time, either by manual labor, or mills contrived for the purpose. Hackling is the last process; which is drawing or combing the flax in small parcels at a time, through a pile or group of polished and sharp iron spikes, placed firmly in wood through an iron-plate.

The linen, as it comes from the loom, is charg- with what is called *the weaver's dressing*, which is a paste of flour boiled in water ; and as this is brushed into the yarn of the warp before it is woven, it is somewhat difficult to separate it when dry. To discharge this paste, the linen must be steeped in water for about forty-eight hours, when this extraneous substance undergoes a kind of fermentation ; this does not extend to the substance of the linen itself, upon the same principle that the green sap is disengaged from the flax without injury to its texture.

When the linen is well washed after this last process, it contains nothing that water can separate ; it is of a greyish-white color, although the fibres of which it is composed, when divested of every adventitious substance, are naturally very white.

The matter which thus colors the linen, is of a resinous nature, insoluble in water, and from its intimate union or dissemination through the very fibres of the flax, is difficult of separation, even by those substances which have a solvent power over it.

To disengage it, however, in as cheap and expeditious a manner as possible, without injuring the texture of the fabric, is the sole object of the process of bleaching.

Bleaching.

In a paper lately published by *Mr. Gavin Inglis*, it appears, that if flax be pulled before it is too ripe, it parts with its coloring matter much more readily than it does when left till the usual time ; and it is also found that this great advantage might again be lost by improper watering.

It has been uniformly found, that flax the greenest pulled is most proper for the finest purposes, and that the whitest flax after drying must be watered in a stream so small, as to require a dam being necessary to receive the water into a temporary pond to cover the flax. The succession of clean water, Mr. Inglis conceives, prevents the deposition of coloring matter, by washing or carrying it away, after being extracted from the flax; while the same flax, from several stagnant ponds, dug in the same ground, and filled with water from the same spring, was very dark in color. The color of the flax, after watering very much, depends upon the following causes;—the ripeness of the flax before pulling; the state of putridity of the stagnant water; the minerals which the water may contain; whether it is steeped in a pond dug, or one formed by damming a small stream; or, if a succession of parcels of flax (which is sometimes the case,) be watered in the same pond, where every succeeding parcel must partake of the contaminating dye produced by the fermentation of the former.—In the course of Mr. I.'s observations, he found the quantity and solubility of the coloring matter in proportion to the degree of ripeness; and in the ripest on a principle which he never till then knew to have an existence in flax, viz. iron,—which may be said to abound in ripe flax. In unripe flax the coloring matter is soluble in water; but, if the flax he allowed so stand on the ground till it has attained a rust-brown color, and the seed be fully ripened, the juices of the plant are then changed from mucilage to resinous matter, and certainly no longer soluble in water, so far as the resin is concerned,—unless assisted by solvents. Alkalies are the common solvents used by bleachers, but Mr. I. did not conceive them altogether adapted to his purpose: he took alcohol, and succeeded in bleaching, to a very beautiful whiteness, flax in its unripe state and its early stages; but as the flax ripened, its power lessened. He exposed full ripe flax to the action of alcohol, both in a liquid state and in a state of vapor, till all the resinous matter was extracted; still a color remained. He subjected it to the action of an oxymuriate, and was astonished to see the presence of iron so strongly indicated.

Test for Alum in Bread.

On macerating a small piece of the crumb of new-baked bread in cold water, sufficient to dissolve it, the taste of the latter, if alum has been used by the baker, will acquire a sweet astringency; or a heated knife may be thrust into the loaf before it has grown cold, and if it be free from that ingredient, scarcely any alteration will be visible on the blade; but, in the contrary case, its surface, after being allowed to cool, will appear slightly covered with an aluminous incrustation.

Prevention of Rust.

The prevention of Rust, on such articles of furniture as are made of polished steel, is an object of great importance in domestic economy. The cuttlers in Sheffield, when they have given knife or razor blade the requisite degree of polish, rub them with powdered quicklime, in order to prevent them from tarnishing; and we have been informed, that articles made of polished steel, are dipt in lime water by the manufacturer, before they are sent into the retail market.

Preservation of Wood by Charcoal.

The following mode of preventing rottenness in Pales, Water-shoots, &c. is recommended by Dr. Parry, who paid much attention to this important subject. He says:

"More than thirty years ago this subject presented itself to my mind, on seeing some Water-shoots which had been pitched and painted in the common way, taken down in a state of complete rottenness. I had read that charcoal buried in the moist earth, had come down to us perfectly sound from the times of the Romans: and that posts long withstood the same moisture, if the part intended to be put into the ground was charred all round to a certain depth. Impressed with these facts, I determined to try an artificial coat of Charcoal, and when new Water-shoots were constructed, I strongly and carefully rubbed them with a coat of drying oil, which I immediately dredged all over with a thick layer of *Charcoal* finely powdered, and contained in a muslin bag. After two or three days, when the oil was thoroughly dried, and firmly retained the greatest part of the charcoal, I brushed off what was loose, and over that which adhered, I applied a coat of common lead-colored paint, and a few days after, a second. The whole became a firm and solid crust; after which the shoots were put in their places, and being examined many years afterwards, appeared perfectly sound."

Observations. Any other color would probably have succeeded equally well with that which I employed. I do not think that lampblack, which is a pure species of charcoal, would have answered the purpose of forming a thick defensive covering so well as the grosser charcoal which I used. But whatever sort of charcoal is employed, it ought either to be *fresh made, or heated again in close vessels, so as to expel the water* which it greedily attracts from the air.

It is to be observed here, that the practice of pitching pales, &c. is both incommodious, and inefficacious, as pitch is so liable to be melted by the heat of the sun.

Mode of painting Sail-Cloth, &c. so as to be pliable, durable, and impervious to water.

This process which is extracted from the *Transactions of the Society of Arts*, is now universally practised in the public Dock-yards.

The paint usually laid upon canvass, hardens to such a degree as to crack, and eventually to break the canvass, which renders it unserviceable in a short time; but the canvass painted in the new manner, is so superior, that all canvass used in the navy is thus prepared; and a saving of a guinea is made in every hundred square yards of canvass so painted.

The old mode of painting canvass was to wet the canvass, and prime it with Spanish brown; then to give it a second coat of a Chocolate color, made by mixing Spanish brown and black paint; and lastly to finish it with black.

The new method is to grind ninety-six pounds of English Ochre with boiled oil, and to add sixteen pounds of black paint, which mixture forms an indifferent black. A pound of *yellow soap* dissolved in six pints of water over the fire, is mixed, while hot, with the paint. This composition is then laid upon the canvass (without being wetted, as in the usual way,) as stiff as can conveniently be done with the brush, so as to form a smooth surface; the next day, or still better, on the second day, a second coat of ochre and black (without any, or but a very small portion of soap) is laid on, and allowing this coat an intermediate day for drying, the canvass is then finished with black paint as usual. Three days being then allowed for it to dry and harden, it does not stick together when taken down, and folded in cloths containing sixty or seventy yards each; and canvass finished entirely with the composition, leaving it to dry one day between each coat, will not stick together, if laid in quantities.

Observations. It has ben ascertained from actual trials, that the solution of yellow soap is a preservative to red, yellow and black paints, when ground io oil and put into casks, as they acquire no improper hardness, and dry in a remarkable manner when laid on with the brush, without the use of the usual drying articles.

It is surprising that the adoption of soap, which is so well known to be miscible with oily substances, or at least the alkali of which it is composed, has not already been brought into use in the composition of oil colors.

Preparation of Saur-Kraut.

Every Russian family, from that of the boor to the nobleman, lays in its stock of cabbage to make Saur-Kraut, about the month of October, before the setting in of the winter frost. It is prepared in the following manner;—They take a large strong wooden vessel, or cask, with which every family is furnished, resembling the salt beef cask of the Scotch farmers, and capable of containing as much as is sufficient for the winter's consumption of the family. They then gradually break down or chop the cabbage, (deprived entirely of the loose outside green leaves,) into very small pieces, beginning with one or two cabbages at the bottom of the cask, and adding others at intervals, pressing and rubbing them by means of a wooden spade, against the sides of the cask, until the vessel is nearly full. They then place a heavy weight upon the top of it, and allow it to stand near to the peach stove, or any other warm place, for four or five days. By this time it will have undergone fermentation, and be ready for use. Whilst the cabbage is passing through the process of fermentation, a very disagreeably fetid, acid smell is exhaled from it; and this is strongly perceptible to the olfactory nerves of a person passing near the house, in which the preparation of the Saur-Kraut is going on. They now remove the cask to a cool situation, and keep it always covered up. Aniseeds which are strewed amongst the layers of the cabbage during its preparation, communicate a peculiar flavor to the Saur-Kraut at an after period.

In the boiling of the Saur-Kraut, and preparation of it for the table, two hours are the least period which they allow it to be on the fire. It forms an excellent, nutricious, and antiscorbutic food for winter use. For the greater part of the year, this article, in one form or another, supplies a daily dish to the table of the Russian peasant. It may be made use of as a separate dish by itself, made into soup, or it may be eaten with boiled animal food.

An Estimation of the LOSS OF WEIGHT *which takes place in Cooking Animal Food. From* MR. TILLOCH'S *Philosophical Magazine.*

"It is well known that, in whatever way the flesh of animals is prepared for food, a considerable diminution takes place in its weight. We do not recollect, however, to have seen any where a statement of the loss which meat sustains in the various culinary processes, although it is pretty obvious that a series of experiments on this subject would not be without their use in domestic economy.

"We shall here give the result of a series of experiments which were actually made on this subject in a public establishment; premising that, as they were not undertaken from mere curiosity, but, on the contrary, to serve a purpose of practical utility, absolute accuracy was not attended to. Considering, however, the large quantities of provisions which were actually examined, it is presumed that the results may be safely depended upon for any practical purpose. It would no doubt have been desirable to have known not only the whole diminution of weight, but also the parts which were separated from the meat in the form of aqueous vapour, jelly, fat, &c. but the determination of these did not fall within the scope of the enquiry.

	lbs.	ozs.
28 pieces of beef weighing	280	0
Lost in boiling	73	14

"Hence the weight lost by beef in boiling was in this case about 26⅓ lbs. in 100 lbs.

	lbs.	ozs.
19 pieces of beef weighing	190	0
Lost in roasting	61	2

"The weight lost by beef in roasting appears to be 32 per cent.

	lbs.	ozs.
9 pieces of beef weighing	90	0
Lost in baking	27	0

"Weight lost by beef in baking, 30 per cent.

	lbs.	ozs.
27 legs of mutton weighing	260	0
Lost in boiling, and by having the shank bone taken off	62	4
"The shank-bones were estimated at 4 ounces each; therefore the loss by boiling was	55	8

"The loss of weight in legs of mutton, in boiling is 21⅓ per cent.

	lbs.	ozs.
35 shoulders of mutton weighing	350	0
Lost in roasting	109	10

"The loss of weight in shoulders of mutton, by roasting, is about 31⅓ per cent.

	lbs.	ozs.
16 loins of mutton weighing	141	0
Lost in roasting	49	14

"Hence loins of mutton ose, by roasting, about 35½ per cent.

	lbs.	ozs.
10 necks of mutton weighing	100	0
Lost in roasting	32	6

"The loss of necks of mutton, by roasting, is about 32⅓ per cent.

"We shall only draw two practical inferences from the foregoing statement. 1st. In respect of economy, it is more profitable to boil meat than to roast it. 2d. Whether we roast or boil meat, it loses by being cooked, from one-fifth to one-third of its whole weight."

The loss in ROASTING arises from the melting out of the Fat, and evaporating the water; but the nutritious matters remain condensed in the cooked solid.

In BOILING, the loss arises partly from the fat melted out, but chiefly from *Gelatine* and *Osmazone* being extracted and dissolved by the water in which the meat is boiled; there is, therefore, a real loss of nourishment unless the Broth be used;—when this mode of cooking becomes the most economical.

* * *

FROM NILES' REGISTER.

GOOD INK.

The following notice, copied from the Richmond "Enquirer," and addressed to the "clerks of courts of justice" in Virginia, involves a matter of great importance to the public; and that every one may possess himself of ink that is durable, I republish, from the 17th Vol of the "Register" the following receipt, which was furnished to me by the late *Joseph James*, Esq. who was remarkable for his attention to matters of this nature, and withal a good chemist, and exceedingly fond of useful experiments. The character of the ink, made according to his directions, is this—it is very strong and durable, yet flows freely from the pen: it is uncommonly black, but dries very quickly.

☞ I repeat, once more, it to be important, in the highest degree, that records, (which are to endure for ages), be written with strong durable ink: and it is much to be regretted that my former mild and friendly admonitions to clerks, on this subject, have had little, or no effect; the *evil* seems, indeed, to be progressive and gaining ground, as there has been lately brought to me several records from different sections of the state, so obscure as scarcely to be legible, even to those whose eyesight remains unimpaired! If clerks, who make use of pale ink, for records, were impeached and deprived of their clerkships, for misbehaviour in office, a few examples might have a salutary effect, and be beneficial to the community at large.

WILLIAM FLEMING,
President of the Court of Appeals.
Somerville, Sept. 1, 1823.

FROM THE REGISTER, VOL. 17, PAGE 64.

Improved Composition of Black Writing Ink.

Take a gallon of soft water, and boil in it one pound of chips of logwood, for about half an hour, then take the decoction from the fire, and pour it from off the chips, while boiling hot, on a pound of the best Aleppo galls, reduced to a fine powder, and two ounces of pomegranate peels, put into a proper vessel. After having stirred them well together, with a wooden spatula, for some time, place them in the sunshine, in summer, or within the warmth of the fire, if in winter, for three or four days, stirring the mixture as often as may be convenient. At the end of that time, add a half pound of green vitriol, powdered, and let the mixture remain four or five days more, stirring it frequently, and then add further four ounces gum Arabic, dissolved in a quart of boiling water, and after giving the ink some time to settle, strain it off from the dregs, and keep it well stopped for use.

If the ink be desired to shine more, the proportion of the pomegranate peel must be increasen; and, in the country where the logwood cannot oe so easily obtained, a pound of ripe privet-berries may be substituted for it.

In order to secure this ink from growing mouldy, a quarter of a pint or more, of spirits of wine may be added; but to prevent its containing any acid, which may injure the ink, a little salt of tartar, or pearl ashes, should be added previously, and the spirit poured off from it, which will render it innocent with regard to the color of the ink.

* * *

THE HORSE.

Every young gentleman, brought up in the country and destined to be a farmer, ought to become familiar with the good and bad points of the horse; that being the animal which will be most associated with him, in his rural labours, and in many of his pleasures. In truth there are very few, be their avocations what they may, that will not be benefitted by a knowledge of the figure and qualities best calculated to impart power, activity and durability to that useful animal, and it is presumed that we cannot more usefully appropriate a portion of this paper, than in using it for the illustration of this subject.—The following extract from LAWRENCE'S PHILOSOPHICAL AND PRACTICAL TREATISE ON HORSES, contains a good general description of the external figure, grounded, as he observes, on the just principles of theory, and confirmed by experience. This general description applies equally to the cart horse and the racer. There are however other particulars in which horses designed for these two purposes differ, which will be adverted to hereafter.—*Edit. Am. Far.*

THE HEAD OF A HORSE should be void of flesh, and for length and size appear to hold fair proportion with the size of his body; his eye full, and somewhat prominent; eye-lids thin and dry; ears thin, narrow, erect, of middling length, and not distant from each other; forehead flat, not too large or square, and running nearly in a straight line to the muzzle, which should be small and fine; nostrils capacious; lips thin; mouth of sufficient depth, and the tongue not too large; the jaw-bones wide at top, where they join the neck; the head not abruptly affixed to the extremity of the neck, but with a moderate curve and tapering of the latter.

The NECK must be of moderate, not too great length, nor too thick and gross on the upper part, nor too large and deep, but rising from the withers or forehand, and afterwards declining and tapering at the extremity, it will form somewhat of an arch; underneath, the neck should be straight from the chest, and by no means convex or bellying out.

The SHOULDERS capacious, and of large extent, so as to appear the most conspicuous part of the body, but without being loaded with flesh; they should reach fairly to the top of the withers, which must be well raised; the chest should be sufficiently full, not narrow or pinched.

The BODY deep and substantial; back, a plane of good width, but handsomely rounded; back-bone straight, or with a trifling inclination, and not too short; loins wide, and the muscles of the reins, or fillets, full, and swelling on each side the back-bone; the space sufficient between the ribs and hipbones, the bones themselves round, and the buttocks deep and oval; the rump level with, or not too much elevated above, the height of the withers; the croup must have reasonable space, and not sink too suddenly, in which case, the tail would be set on too low, which ought to be nearly on a level with the back.

The HINDER QUARTERS should spread to a wider extent than the fore-parts, and the hind-feet stand farther asunder than those before; the thighs should be straight, large, muscular, and of considerable length; the hock wide and clean; the shank not too long, but flat, and of sufficient substance, its sinew large and distinct, the fetlocks long; the hocks should form an angle of such extent as to place the feet immediately under the flanks. The fore-arms, like the thighs, should be large, muscular, and of good length, the elbows not turning outwards; the knees large and lean; the shank or cannon-bone, flat, strong, and not too long; the tendon large; the fore-arm and shank must form nearly a straight line; fetlock-joints large and clean; pasterns inclining to a certain degree, not too long, but large in proportion to their length; the coronary rings not thick or swelled, but clean, dry, and hairy; the feet neither too high nor too flat, and of size apparently a sufficient base for the weight they have to sustain; hoofs, of colour dark and shining, without seams or wrinkles, tough and strong, not hard like oak; foot internally concave, soal hard, but not shrunk, heels wide, and of middling height; frog not too large or fleshy, but tough and sound; the feet of equal size, should stand exactly parallel, so that the front or toe incline neither inward nor outward; the fore-feet should stand perpendicular to the chest, not too much under it, and they should be less wide apart than the fore-arms; the legs should not be loaded with hair.

ECLIPSE AND HENRY.

A writer in the last Number of the London Sporting Magazine, received at this office, makes the following remarks on the great New York Race.

When on the subject of jockeyship, and racing, I was very much amused with the account of the grand match that has been lately run at New York, between the American Eclipse, and Henry, who, it seems, was brought thither from a distant part of the country for the purpose; by which it appears, that unless a transatlantic mile is shorter than an English one, they have got some good horses in that country, as, in one heat, the four miles were run in seven minutes and thirty-nine seconds, being almost equal to any thing upon record*—particularly as the heat before it, had been run within a second of the same time—but, unfortunately, they have not given us the weights.—The horses starting by the "tap of the drum," is quite a novel idea, and, perhaps, might not exactly suit some of our young ones, who are rather queer at getting off; but the ebullition of feeling exhibited by the people at New-York, shews that under all climes, the sports of the field are congenial to human nature. To be sure, it is diverting, to picture to oneself Sam Chiffney, on the shoulders of a Yankee, borne off in triumph after having won his race, to the tune of "See the conquering hero comes!" and, it appears, Mr. Purdy felt more at home on the back of his favorite Eclipse. I wish the Editor of the New York paper had gone a little more into detail, and given us the reasons why Taylor did not ride Henry the two first heats, and why Purdy was not put on Eclipse at first, as we are led to believe they are the Buckle and Chiffney of that country. Perhaps, had Taylor ridden Henry the two first heats, and not made all the running as he did, it might have altered matters considerably, for it will be observed that *he waited on Eclipse the last heat, and was only beat by a head.* On the other hand, had Purdy been on Eclipse the first heat, he might have saved him running the last at all. They wanted your Newmarket correspondent, OBSERVATOR, Mr. Editor, to have given us the the age, "names, weights, and colors of the riders," in technical lingo; and how amusing would it be, if some good artist were to go around the world, and give us sketches of the different costumes of the riders, and the forms of their horses, in all different countries; as well as some account of their method of training, trials, &c.!" I have often thought how it must have surprised my Lord Charles Somerset, when he landed at the Cape of Good Hope, during the races, to see the black jockies riding without shoes or stockings, a ludicrous account of which I saw in a letter from the late Lady Charles, to one of her sisters. What a contrast to Tom Goodison upon Sunbeam!

Indeed, we have only to cross the water to Ireland, to see a little difference in these things. Some years since I had a horse in training at the Currah of Kildare, and making a match with the celebrated Colonel Wardle over the bottle, to be run *the next day.* I went off in the night seventeen Irish miles, to have my horse set for the race. When I arrived at the stables, about one o'clock in the morning, I saw by the light of the moon, that the key was in the door. Accompanied by a friend, I entered. There were seven horses in the stable, and one of them the best of his year! And after walking two or three times up and down it, a young voice exclaimed—"Ah! what are you after here?" "What am I after!" said I—"what is your master after, that he leaves his horses in this way?" "Sure, didn't master lock me in here to take care of them," said a ragged urchin in a hay bin. However, it is an old story, and I will not tell the sequel. I set my horse myself, and lost the race.

To return to New York. I can easily conceive this to have been a most interesting race, not only as relates to the stakes—20,000 dollars!—but as being made by one party of sportsmen against another (as if York and Doncaster were to coalesce against Newmarket), that interest must have been increased an hundred fold. We cannot wonder at the backers of Eclipse being proud of their horse; neither can we wonder, in the moment of triumph, that "Long Island Eclipse" was to beat all the world; but the world is a wide place, and no doubt *Mr. Fan Rast*, his owner, is aware of this. I always take a leaf out of another man's book, when I think it will suit my own; and I like Yankee's idea much, that "size and bone, are essential to strength, and ought to be taken into calculation; and supposing blood and bottom to be equal, must always win." To encourage horses of this description, they have Welter weights in the United States.

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* We should like to know when, and by what horses, *three* successive heats were run in England in as short time as those by Eclipse and Henry?—*Edit. Am. Far.*

FOR THE AMERICAN FARMER.

RULES AND REGULATIONS OF THE "MARYLAND ASSOCIATION."

1. This association shall be called the "Maryland association for the improvement of the breed of horses."

2. The president or one of the vice-presidents, together with eight members shall be necessary to form a quorum to transact the business of the association.

3. There shall be annually appointed, on the first Monday of June in each and every year, during the continuance of this association, twelve managers; and a committee of elections for the admission of new members, to consist of five members, who shall decide upon all applications for membership by ballot. Two black bails to exclude.

4. The subscription of every member shall be twenty dollars annually, to be paid to the Treasurer on or before the 15th day of September in each and every year.

5. The officers and managers of the association in regular meeting convened, may by a vote of two thirds of the members present, expel any member for improper conduct.

6. The association shall be free for any horse, mare, or gelding, to be subject to the rules and regulations of the association, and to carry the following weight, viz:

Aged horses, ...	126 lbs.
Six years old, ...	120
Five years old, ...	112
Four years old, ...	100
Three years old, ...	86

An allowance of three pounds will be made to all mares, fillies and geldings: No horse, mare, or gelding, which shall not be entered with the Secretary on the day previous to the day on which they run, between the hours of eight in the morning and five in the evening, shall be permitted to run, unless the owner of such horse, mare or gelding pay double entrance.

7. Every rider at starting shall be dressed neatly, in a silk or satin jacket, jockey cap, and boots or half boots.

8. The heats to be run for during the existence of this association shall be two, three and four mile heats: to rub thirty minutes between the heats of two miles; and thirty minutes between the heats of three miles; and thirty minutes between the heats of four miles; the time of rubbing to commence from the weighing of the last rider; and the following shall be the distances, viz:

For two mile heats, ...	120 yds.
For three mile heats, ...	180
For four mile heats	240

And all horses, mares, or geldings not coming within the said distances, before the first horse, mare, or gelding pass the starting pole, shall be deemed distanced, and not allowed to run on that day for the same purse.

9. No combination or partnership shall be permitted. If therefore any horse shall win a purse, and it shall appear to the satisfaction of the Judges, before the purse is paid, that such horse did run in partnership, with any other horse, the purse shall go to the fair winner and the combined horses shall be deemed distanced, and never be allowed to start again for any of the purses.

10. The horse, mare, or gelding winning two clear heats and bringing in the proper weight, shall be entitled to the purse, unless he distance all the others in one heat, in which case the winner shall not be obliged to start again: but if three several horses win each a heat, then those three and they only, are to run for a fourth heat, and such horses as are excluded by this rule from running for a fourth heat, shall be deemed only drawn, and not distanced.

11. In sweepstakes, &c. of one heat, when two horses come in so near each other, that it cannot be decided which is first, they two only must start again to determine which shall be the winner.

12. When running heats, if it cannot be decided which is first, they may all start again, except the dead heat be between two horses, that if either had been winner the race would have been over:—in which case they two only shall start again to decide which shall be entitled to the purse. Such horses as are prevented by this rule from starting again, shall be deemed only drawn and not distanced: and all bets made on such horses being distanced, shall be pronounced as drawn bets; and a dead heat is to operate as no heat.

13. If but one horse is entered for any purse, such one by galloping over the course, two, three, or four times according to the distance to be run, shall be entitled to the purse.

14. The hour of starting each day shall be twelve o'clock, and in case of bad weather, a majority of those who start horses may postpone the race to the next day, provided they agree to do so before nine o'clock, in the association rooms, in which case the other races are to be postponed a day longer.

15. No testimony shall be received respecting foul riding, &c. except that of the judges and managers, and all disputes shall be decided by the three judges in the starting stand: but should it so happen that one or two of the said judges, shall be to give testimony, then all the other judges shall be called in: but where foul riding &c. is discovered by all the judges in the starting stand, then they, and they alone shall decide; but it is to be understood that the testimony of judges and managers is to be only on honor.

16. There shall be three judges in the starting stand, one in the distance stand, and one in each of the other two stands; and they shall not admit any person or persons, except the officers of the association, to enter the stands with them.

17. On weighing after each heat, one pound shall be allowed each rider in lieu of the bridle; and in case any rider be deficient in weight, the horse, mare, or gelding rode by such rider, shall

be deemed distanced, and the heat be given to the next horse that shall bring in the proper weight.

18. After each heat the riders are to come up to the pole and not dismount until so ordered by the judges; and any rider or riders disobeying this rule, shall be precluded on weighing, from the benefit of his saddle, whip, and two pounds allowance in lieu thereof: and if his bodily weight does not make his exact weight, the horse rode by such rider is to be deemed distanced.

19. When any horse shall be entered with the secretary, the person so entering him, must at the same time enter his age and name, and deposite with the secretary such documents as he may think necessary in support of the truth of the age so entered—the sufficiency of such documents to be decided on by the judges: such documents to be regularly endorsed and filed by the Secretary.

20. The winning horse of each day shall be excluded from running for any of the other purses during that meeting.

21. All races shall be run with the left hand to the poles.

22. If a rider accidentally falling from his horse and the horse is rode in by any person of sufficient weight, he shall take place the same as if the accident had not happened, provided he goes back to the place where the rider fell.

23. All bets are understood to relate to the purse, if nothing is said to the contrary.

24. When two horses are bet against each other for the purse, if each win a heat, and neither are distanced, they are equal; if neither win a heat, and neither are distanced, they are equal; but if one win a heat and the other do not, the winner of the heat is best, unless he shall be distanced; in which case, the other, if he save his distance, shall be considered best; and when both are distanced, they shall in all cases be deemed equal.

25. When a bet is made upon a heat, the horse that comes first to the starting (or ending) post is best, provided no circumstance shall cause him to be deemed drawn or distanced.

26. A bet made upon a purse or heat is void, if the horse betted on does not start.

27. The meetings of this association shall be held twice in each year, viz. at Barnum's Hotel in the city of Baltimore, on the first Monday in July, and at the association rooms on the race course, on the first day of the October races: but should circumstances render more meetings necessary, five days notice thereof, shall be given in some one of the newspapers of the city of Baltimore.

28. On the death or resignation of any of the officers of the association, the vacancy or vacancies shall be filled by ballot, at the next meeting of the association thereafter.

29. The members of the association will dine together on the day of the third day's race: and early in the morning of that day, the members will give in their names to the secretary, who will provide a dinner accordingly, to be on the table at three o'clock, P. M.

30. The secretary shall provide a good set of scales, together with good weights, for the use of the association.

31. E. L. Finley Esq. having contracted with the association to furnish them with a race course on his farm, (Canton) near Baltimore, free of charge, during the continuance of this association, he shall enter into an obligation with the president, to have the said course properly prepared and kept in good order.

32. The officers of the association and members of the committee of elections shall be ex officio managers.

33. The judges of the races shall be appointed by the managers on the day of each race.

34. The secretary shall keep a book in which he shall enter the proceedings of the association, an account of each day's race, and the names of the members of the association; and the treasurer shall keep a book in which he shall enter an account against each member, and a general one against the association.

35. No horse shall be permitted to start for any of the purses, unless entered by a member of the association.

36. The president, vice-presidents and managers, or any five of them, shall make, and cause to be enforced all rules and regulations for the good order and decorum of the course, and decide on all matters not otherwise provided for by these regulations.

37. *Gambling of every description shall be prohibited, and the president, vice-presidents and other officers of the association, shall cause this regulation to be respected.*

38. No rider who has been or may hereafter be expelled from any established course, shall be permitted to ride for any of the purses of this association; and in the event of any rider being dismissed from this course, it shall be the duty of the secretary to notify other racing institutions thereof.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Sheppard's Inspection Warehouse, Baltimore, during the quarter, commencing on the first day of July, in the year eighteen hundred and twenty-three, and ending on the first day of October, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	541	13		577
Number delivered.	618	17		635

LANCELOT WARFIELD, Inspector.

TREASURY OFFICE, ANNAPOLIS, Oct. 8, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco Inspected at and delivered from Dugan's Inspection Warehouse, during the quarter, commencing on the first Monday in July, in the year of eighteen hundred and twenty-three, and ending the first Monday in October, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	340	90	40	470
Number delivered.	380	40		420

R. WATERS, Inspector.

TREASURY OFFICE, ANNAPOLIS, Oct. 9, 1823.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

TO THE EDITOR OF THE AMERICAN FARMER.

DEAR SIR,

In a late paper of your's, I find some gentlemen from the South, are about reclaiming a part of the extensive wet lands, on the Eastern Shore of this State, for the purpose of raising rice—a doubt seems to be entertained of its being raised in our climate. In my youthful days, which is many years past, there were many African negroes in Prince George's, most of them would have small patches of rice on low grounds on the edges of a spring branch; it was drilled and grew well, being hoed and kept quite clean of weeds and grass, and produced good rice, which was cleaned by them of the husk, by beating lightly in mortars prepared for beating corn for homony.

An old and intelligent family servant, now 78 years of age, says that before the war, (the Revolutionary,) much of it was raised by the African negroes, and sold by them to the whites.

A PLANTER.

TO THE EDITOR OF THE AMERICAN FARMER.

SIR,

You gave a satisfactory proof of the interest you take in the plantation of Forest Trees, by adding to my communication on that subject, some directions for raising the oak; but Chesnut is scarcely less valuable, and I apprehend, we have in this part of the country, at least, more lands laying waste, suitable for this last kind of timber, than for oaks.

Permit me therefore, to call the attention of gentlemen possessing old and worn out tobacco lands, or hilly, washed and barren old fields; unfit for any other culture, to the chesnut, which may now be gathered in abundance in almost every neighborhood. These may be planted at any time between this and March or April, either in the burr or without; and any quantity, no matter if but a hundred, to some advantage, even without great preparation. Let those who can do no more, take a strong hoe and loosen the earth five or six inches deep and ten or twelve wide, in different parts of such old fields, scattered promiscuously and not in rows; cover the nut about four inches, with the best mould at hand, and then a few small branches of furze or briers. It is supposed that if one out of the hundred should succeed, the planter will be amply rewarded for his trouble, whilst this kind of timber is so valuable in making fences. If such experiments should succeed in a few instances only, there will be encouragement to repeat and extend the planting annually, so that by degrees, many farmers short of timber for rails now, may be abundantly provided in the course of a few years.

Your's respectfully,

THOMAS W. GRIFFITH.

Oct. 14, 1823.

TO THE EDITOR OF THE AMERICAN FARMER.

TO PREVENT THE FEMALE BREAST FROM GATHERING.

[*Communicated by a Mother.*]

SIR—You are a husband and a father, and I greatly mistake your character, if it would not give you particular satisfaction, to communicate in the Farmer, any means of mitigating the sufferings which MOTHERS experience, in endeavouring to give to their infants from their *own* breasts, their most congenial and healthful sustenance. There is perhaps in the catalogue of human pains, none more acute than those which are experienced from the gathering of the female breast, in time of giving suck—pains which too often drive the devoted mother, with heartfelt reluctance, to consign to a strange bosom, the beloved offspring of her dearest affections, therein relinquishing the most interesting of all her maternal cares and duties, and losing the effect of the most endearing associations, provided by nature, between mother and child. But the faithful wife and the tender mother, only can understand, for she alone can feel the nameless pleasure of imparting to her child in helpless infancy, its chief pleasure, its only nourishment.

None else therefore can estimate the privation. It is for them and their benefit I send you a remedy which I know by experience to be effectual.

To prevent the female breast from gathering, or to cure them after they have gathered.

To the yellow of one egg, add one table spoonful of brown sugar, one of honey, and one of rum, a small tea spoonful of powdered alum, and as much of rosin, this mixture should be put in a pewter vessel, and mixed well together, then put over a slow fire, and stirred all the time with the finger*, until it comes to a consistence that will spread easily.†

A plaster of this spread over the breast before the child is put to them, will prevent their gathering, or should a fever at any time fall in them, a plaster of this salve should immediately be applied, and it will certainly prevent gathering—should matter be formed before the application of the salve, the breast should be kept covered with a thick brown paper made wet with rum, and the salve over the diseasesed part only; when it breaks, there should be a tent kept in it, and the salve spread on *lint*, the salve side next the ulcer—the child should be taken from the breast as soon as matter is discovered, which may be done without the least danger of losing the use of the breast, (which is too often the case by the skin cleaving to the bones,)—after the cure is made the child may be allowed to suck, the milk will soon return.

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* *It must never be made too hot to bear your finger in.*

† *On lint in order to keep the salve alive.*

EXTRACTS FROM LATE NUMBERS OF THE

London Farmer's Journal.

VICE CHANCELLOR'S COURT.—Lord Byron having a short time since, obtained an injunction to resrtain a Mr. Dugdale from publishing several of the Cantos of *Don Juan*, the latter attended on Friday in person, to shew cause why the injunction should be dissolved. The defendant exhibited considerable talent in the course of his argument, and read various passages to shew, that the work, from its disloyal and immoral tendency, was not entitled to the protection of the Court. The following were among the stanzas quoted:—

"But still there is unto a patriot nation
 Which loves so well its country and its King,
A subject of sublimest exultation,
Howe'er the mighty locust, desolation,
 Strip your green fields, and to your harvest cling:
Gaunt famine never shall approach the throne,
Though Ireland starve, great George weighs twenty stone."

"But never mind:—'God save the King!' and kings!
 For if he don't, I doubt if men will longer—
I think I hear a little bird who sings,
 The people by and by will be the stronger.
The veriest jade will wince whose harness wrings
 So much into the raw as quite to wrong her
Beyond the rules of posting,—and the Mob
At last fall sick of imitating Job."

The Vice Chancellor dissolved the injunction, thinking the question ought to be determined by a Court of law, where, if plaintiff obtained a verdict, he might come with more propriety in this Court.

* * *

Too much of a good thing.—A certain country squire had a *warren*, and the village curate was Sunday after Sunday, regaled with the delicacy of rabbits, till he became as sick of them, that he took the liberty of *hinting* his dislike of the standing dish to the host, in the following grace, on rising from the table:

"Of rabbits *hot*, of rabbits *cold*,
 "Of rabbits *tender*, rabbits *tough*;
"Of rabbits *young*, of rabbits *old*,
"I thank thee L——d, we've had enough!

* * *

Wine.—A Danish chemist has demonstrated that apple juice mixed with a great quantity of sugar produces a drink which more nearly resembles wine than any other substitute. Cherries and currants, he says, are not so proper for wine as the apple.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 17, 1823.

☞The communication signed Hamilton, sent for insertion in the Farmer, as a reply to an article in the last number from the North American Review, was received too late for insertion in this paper—the Editor is required to furnish copy for the Printer, one week before hand, except the prices and editorial scraps, and has little control over the mechanical part of the business. The paper though dated on Friday, is issued in fact on Thursday evening.

Several other communications are on hand, to the writers whereof the Editor is much indebted.

THE NEXT CATTLE SHOW.

Those who propose to put in claims for the premiums offered for crops, have only to exhibit to the judges, the certificates of *their neighbors*, or some other satisfactory proof on which the judges can safely rest their decision.

In regard to fermented liquors, it is understood that it will not be necessary to produce, on the ground, the five gallons of home made wine—it will only be necessary to exhibit a sample and to show that it is a fair sample of a quantity not less than five gallons.

An impression seems to exist that to obtain the premiums offered for Live stock, it will be necessary to have animals of very superior qualities. This impression is certainly erroneous, and, if not removed, will be the cause of many premiums remaining on hand, which might be carried off by almost any farmer in the state. It requires many years influence of an association, like ours, before its effect becomes visible in a general improvement of domestic animals. Such improvement is not the work of a day or a year, and therefore, a cow, a sheep, or a hog, which would now be richly entitled to a premium, would not be worthy of exhibition some years hence, when the effects of our annual exhibitions shall have been now fully developed.

It does then, evidently behove every well-wisher of our institution—every farmer who has any thing *good*, by comparison with that of his neighbors, to send it to the show.—In the commencement of peaceful emulations, such as are the objects of our society, before there has been time for the exercise of perseverance and the display of skill, the farmer who shews the *best*, though he takes the plate, is entitled to no more credit than he who shews the best *he can*—and, those who refuse to bring any thing for fear it may be excelled, remind us of the young ladies we often meet in society, who, though they can sing very well, refuse to entertain the company because they cannot sing better than *any one else*. But what is excusable pride in a Miss in her teens, may be nonsense *in a plain farmer*. Let us make the exhibition as large and as respectable as we can, and if deficiencies appear, time and attention will remove them.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard street, from wagons, $7—fine do. $6 50—Wharf, do. $6 to $6 25, do. do. $6 cash—White wheat, $1 20 to 1 30—Red do. $1 10 to $1 18, for Maryland, and $1 to $1 09 for Virginia—Rye, 44 to 45 cents—Corn, 36 to 38 cents—wharf Oats, 33 cts.—wagon Oats, 37½ cents—Beef, 8 cts. per lb.—Live Cattle, $6 to $6 50, per cwt.—Bacon, hog round, $10—Pork, $7 50 per c. lb., 6 to 8 cts. per pound—Mutton, 5 to 6 cts. per lb.—Beans, retail, $1 50, cargo price, 1 12½—Peas, retail, 75 a 80 cts., cargo price 58 a 60 cts.—Red Clover Seed, $6—Orchard Grass do. $3—Herds' Grass do. $3—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 33 cents per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, $6 00,—Herrings, No. 1, $2 70 per bbl., No. 2, $2 37½—Fine Salt, 75 cents per bush., coarse, do. 70—Butter, (firkin) 14 cts. per lb.—Eggs, 12½ cts. per doz.—New Hay, $15 per ton, old do. $16—Straw, $9.

MARYLAND TOBACCO.—Five hogsheads Ohio tobacco sold from $7 to $13.

WASHINGTON JOCKEY CLUB RACES.

The races will be run over the Washington Course, commencing on Tuesday, the 28th of October, viz:

1st day 4 mile heats—purse $500, free for any horse, mare or gelding:

2d day 2 mile heats—purse $200, free for 3 and 4 years old only; and the

3d day 3 mile heats—purse $300, free for any horse, mare, or gelding, the winning horse of the first day only excepted.

The purse of each day will be delivered, in due form, by the Treasurer, at the starting pole, to the successful rider.

A copy of the rules and regulations of the Club will be forwarded by the secretary to any one making application, who contemplates entering for the purses.

THE STEWARDS.

The following, forms one of the standing regulations of the Club, and at a full meeting on the 27th inst. it was specially determined to enforce it rigorously, viz:

"Resolved, *That Gambling of every description be prohibited, and that the President, Vice-President, and other officers of the Club, cause this rule to be respected.*"

The officers hope for the countenance of the public in their determination to enforce this regulation with the utmost rigor and energy.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

TO THE EDITOR OF THE AMERICAN FARMER.

FISH AS MANURE—STATEMENT FOUNDED ON EXPERIMENT.

Sir,

I promised you when I had the pleasure of seeing you here last year, that I would give you the result of an experiment made by using herrings as a manure; and since I have fully tested the experiment, I now give you the result, with all its minutiæ. In may 1822, I purchased 32,000 herrings, and placed them in drills 4 feet apart, on 4023 square yards of ground which is 817 yards less than an acre—they were placed quite thick in the drills—and then covered with a plough, by throwing two furrows together.—On the 24th May, I finished planting the ground in corn, by dropping the same on each side of the drill at about three feet apart; but found when the corn grew about three feet high it was much too thick, and was compelled to plough out every other row.—The corn was once ploughed with a small Corn plough, and twice with the Cultivator, which was all the cultivation I gave it--the corn yielded, when gathered, a fraction more than thirty bushels; and although last year the corn in this neighborhood, suffered much from the long drought, it had upon this corn no apparent injurious effect. While the leaves of other corn in its immediate neighborhood were dead and dried up above the ear, this was perfectly fresh; and the dry weather appeared not at all to affect its verdure.

On the 10th of October I again ploughed the ground, and on the same day sowed the same with two bushels of wheat—in the spring, the wheat grew so luxuriantly, I found it necessary to cut an acre with a scythe. It again very soon covered the ground.—The weather preceding harvest was very favorable to this wheat, being uncommonly dry—had it been wet, I believe not one bushel would have been gathered.—Dry as the weather was, it was cut with much difficulty, it had fallen to the ground so much.—It yielded, when carefully taken from the straw, twenty-nine bushels—you saw the ground yourself, and know how very poor it was; and I am persuaded, had the fish been placed with some regularity on the surface of the ground, in the place of drills at so great a distance apart, by which the ground would have been regularly manured, it would have produced several more bushels of wheat than it did.--As it is, it yielded at the rate of 34¾ bushels to the acre—I now give you the cost and profit:—

32,000 herrings, at 31 cts.	$9 92	
Hauling 5 loads of herrings at $1 25,	6 25	
Ploughing in do.	1 00	
Expense of planting and cultivating corn,	3 00	
		$20 17
Cr.		
By 30 bushels corn at 75 cts. which was the price last fall		22 50
Clear profit on the first crop,		2 33
I say nothing of the fodder, leaving that to pay the expense of getting in corn.		
29 bushels of wheat at $1 25, - -		36 25
		38 58
Expenses.		
2 bushels of wheat at 1 25,	$2 50	
Cultivation, - - - - -	2 50	
		5 00
Clear profit, leaving the land rich,		$33 58

I would here remark, that although I used 32,000 herrings, 20,000 to the acre is quite sufficient, and will make a more certain crop than a greater quantity. I have used this spring, Catfish and Perch for my potatoes, and find them as good again as the best stable manure; and you will find at Messrs. Bradford & Cooch's in a few days, a barrel of potatoes made from the fish—also a few at the top of the barrel in paper, the seed of which you gave me last fall—they were, I think, sent you from the North—they grew well with me, and are the finest potatoes for the table I ever saw.

Your's respectfully,
BENJAMIN F. MACKALL.
Wilna Mills, Cecil County,
October 12, 1823.

FOR THE AMERICAN FARMER.

OBSERVATIONS ON THE VINE, AT SUNSWICK, N. Y. FOR 1823.

The season has been more unfavorable than I have known for years, but it has given us a favorable opportunity of judging of the effects of one of our worst seasons upon the various species of the grape, and of course, has added much to our experience in determining what kinds are most to be relied on in our climate. The wet and cold spring, injured very much the blossoms of the vine, and the same weather at times through the summer, caused a variety of vines, chiefly purple and black; such as the Black Hamburgh, and others of a delicate kind from France, to mildew. All my white grapes succeded without any precaution, and the Chassilas of Fontainbleau was the most vigorous and prolific. All the grapes abovementioned were procured the last autumn, and remained entirely exposed to the winter's frost, except that a small heap of earth was drawn up over the roots six or eight inches on the stem. This was a precaution to preserve the root of the plant, if the experiment on the bearing wood should fail. American grapes, as the Dorchester from South Carolina, and Skuppernong from North Carolina, have done well. The Orwicksburg from the Schuylkill, appears also very thriving. I had a small bunch of grapes from a cutting put in the ground last March. This species, as well as the preceding, deserve particular notice.—I have now fifteen species of American grape, but only the three have produced fruit.

The Hungarian and German vines which I received the last year from Vienna, have done remarkably well, considering the long voyage. The Blue Cartager, which produces the Bunda or Osen wine, and by a particular process the Munster Tokay, is as vigorous as any of our American vines, and is also an excellent table grape. Some of the cuttings put down in 1822, have borne three or four large bunches, and produced shoots 20 feet long. This vine will probably become the favorite in this country.

The White Tokay has also produced fruit from cuttings of 1822.

The Queen Grape produced bunches 15 inches long.

The Rough Black and the Red Sheerkats produced large delicious grapes.

The White Muscat and White Chasselas, from the same place has also succeeded well.

The following is the order of their ripening this year.

Chasselas and White Muscat, 5th September.
Queen Grape, 12th September.
Tokay, Cartager, Sneerkats, Rough Black, 20th to 25th September.
Dorchester, or Isabella, 25th of September.
Skuppernong, 1st of October.

It is probable that these grapes would ripen, in ordinary seasons, ten days earlier. The early frosts of this year, did not seem to affect any of the fruit. It is proper to mention here, that my vines suffered this year very much from bleeding profusely at the ends and eyes, in the spring, in consequence of having used a *large* quantity of stimulating manure the last year--(horn shavings.) Insects have not been troublesome this year, to the vine.

Your's, &c.
GEORGE GIBBS.
Sunswick, Oct. 10, 1823.

John S. Skinner, Esq.

P. S.—The Watermelons from the seed you sent me, have ripened this year, but they are much inferior to the Chauncey melon, which I got from the Commodore, on his return from the Mediterranean. If you will accept a few seed I will send them on.

TO THE EDITOR OF THE AMERICAN FARMER.

HESSIAN FLY.

Bremo, October 11, 1823.

Dear Sir,

I send you herein some blades of wheat, with the eggs of the Hessian Fly upon them. They are too minute to be examined satisfactorily without the aid of a magnifying glass, though they are discoverable by a good naked eye.

After keeping some blades of wheat three days, wrapt in paper in my pocket, and finding the eggs were still discernible, although the blades are much withered, and some of the eggs missing, —I hope the fresh ones, inclosed this morning, may reach you in such preservation, as to enable you in future to recognise the eggs in your own fields.

I have observed for seven years past, about the 10th of October, in this part of Virginia, the eggs are every where to be found upon the volunteer and early sown wheat—they remain in this state from six to ten days, when they hatch into very minute worms, and immediately descend to the tender parts of the plant, enveloped by the blade near the root, where, for a few days, at this season, they may be seen in this minute magot form, which they soon change into the chrysalis—at first, of a clear transparent white, which as it enlarges shows a split in the middle, and finally assumes the flax seed color and size.

I have been thus particular, although I published this account of the Hessian Fly several years ago, as subsequent observations more particularly excited by Dr. Say's account of this insect, in his communication to the Philadelphia Society for the promotion of the Natural Sciences, have fully satisfied me, that that learned and distinguished naturalist, has fallen into an error in relation to the propagation of this destructive insect.

It may be said that these eggs may be the deposite of some other fly—but I have uniformly found them when the well known hessian flies are seen to make their first appearance in the fall, and immediately preceding the fatal influence of this enemy to our wheat crops. I have seen the worms descending from the deserted shell of the egg towards the stalk of the plant, and upon stripping down the blade, I have discovered a worm of the same appearance attached to the tender stalk of the wheat near the root—and finally, in the course of successive examinations, I found these worms, after a few days, disappearing, and in their place the white transparent chrysalis.

By giving the foregoing a place in your valuable paper, it may possibly lead to some further discoveries of greater value to the community than the mere *modus propagandi*, of this hitherto unassailable enemy to the most valuable of our agricultural products.

Your's, &c.
JOHN H. COCKE.

TO THE EDITOR OF THE AMERICAN FARMER.

ON BUILDING & FILLING ICE HOUSES.

Latitude 39°
October 15, 1823.

Sir,

I would not give one solid ounce of experience for a whole ton of theory.—I have an ice house, the pit of which is 6½ feet, the earth thrown out raised a good mound 2½ feet more, making nine feet to the bottom, which is a tolerably dry sand. It was for many years a pit with a pen inside, made of flat pieces of mauled oak—the earth came to the back of the logs.—In the centre of the bottom there was what was called a dry well,—that is, a round hole a foot deep, of which I have never perceived the advantage.—The same kind of mauled pieces laid on the bottom, formed the floor—the pen was about 11 feet square in the clear, with a capacity of about one thousand cubic feet. A thatch of corn tops on poles, formed the roof and cover, with a door of entrance into the north end. This house used to hold about from 30 to 35 common sized ox cart loads; the ice pounded from the size of a walnut to a brick.—It generally kept ice till the middle of August, and then left us more disagreeably off, than if we had not enjoyed it at all. It was near the poultry yard, and the blame was laid on the poor hens, who, fond of a cool place to nest in midsummer, used to scratch holes in the bottom of the thatch, and let in the rain water.—This was often one cause of the loss of the ice, but not the only one. The fact was too well established, the ice seldom reached September—and I became fully convinced that the principal reason of the early loss was, that the mass of ice was too small. The rats also plagued us very much in the chief use of a country ice house, the preservation of fresh provisions.

I determined to endeavour to remedy all the faults. With this view, the old work, now much out of repair, was broken up—the pit enlarged to 16 feet by 24, in which a 9 inch brick wall was run up to 6 inches above the ground, and the floor was paved two bricks thick—the pit was then 14½ feet by 22½ feet in the clear; and 8½ feet deep to the surface of the earth. On the pavement I laid four sills, on which I raised a frame, 11 feet by 19 feet in the clear, with sleepers 6 inches deep, resting on the pavement. The top of the frame even with the brick work.—A tight floor of good plank was laid, and the frame planked up tight on the inside.

This plank pen, or pit, is 11 feet by 19 in the clear. There is of course, a space of about 20 inches all round, between the plank and the brick work.

The design in making the pit oblong, was to take off 7 feet of one end, and appropriate it to milk in the summer season—but having a cool dairy which keeps milk pretty well, this was never done; and the whole pit containing upwards of 1500 cubic feet, has been used for ice.

Above ground, upon the brick work, there is a framed house 24 feet by 16 feet, and 5 or 6 feet pitch. This house is but half boxed, and the air is freely admitted between the main and false plates. There is an upper floor laid on the joists, except a space about 2 feet by 6 in the centre.—Directly over this space there is an aperture 6 feet by 6 or 8 inches, in the ridge of the roof, over which aperture there is a bonnet to keep the rain out. The sides and ends from the aperture in the floor, to that in the roof, are planked, so as to prevent any opening between the loft and this centre ventilator. By these contrivances, the loft is kept stowed full of straw to produce more than the coolness of a thatched roof, and yet the air has an uninterrupted passage in at the eaves, and out at the ridge. There are a few narrow strips of plank nailed a foot apart on the innersides of the studs—and the space between the weatherboarding and the strips is also filled with straw.

On the south side of this house there are trees, which break the rays of the mid-day sun from the roof.—The body of the house is kept white, and sometimes the roof.

When first used, the space between the bricks and planks was kept clear; with the idea that the air would prevent the damp from the earth and bricks going to the planks—but experience has fully proved in this latitude, that from the last of February the air should be kept as far from your mass of ice as possible.—For several years this space has been kept well filled with dry straw. We have ice in this house, at this time, and since it has been packed in the manner now pursued, it has not been unusual to have ice, till ice has again returned.

The mode of putting the ice up, is considered very material, and is as follows.—The space between the bricks and planks is examined, and seen to be well packed with dry straw—the plank pit is made perfectly clean. The ice is brought in as large cakes as can be conveniently handled, and in as regular squares or oblongs, as they can be conveniently cut and broken by the eye and axe.—These cakes are laid upon the naked plank floor of the pit, leaving as small joints and crevices between as possible. A trough or old canoe is placed near the door of the house—into this the small pieces and broken bits are put and pulverised quite fine, and the crevices between the layer of cakes is well filled with it; the surface of the cakes being kept clean.—A second layer of cakes is then laid down, and the crevices filled as before—and this simple method is continued till the pit is full. A very little care will keep the surface of each layer level, and the whole will go in as solid as a piece of stone mason's work.

No straw is put on the floor under the ice; because experience has proved, it is not necessary, and because if it should become wet and need to be removed ever so much, it cannot be got at.—Nor is there any put between the side planks of the pit and the ice at the time of packing, because it is not then necessary, nor can it be well done at that time.—With all possible care the straw will mix with the ice and be put in irregularly.—Whereas if the pit be filled solidly and entirely with ice, as soon as the ice begins to shrink from and leave the sides of the pit, this regular vacancy can be well crammed with dry straw, and if this straw get damp, it can be easily taken out and changed. But if the straw had been put in the ice, it would take up more space, and from its irregular stuffing, would be found much more difficult to remove, should it become damp or mouldy.

About the last of February, the mass of ice is covered over with dry straw, not less than three feet thick, and if straw is plenty, the house from the ice to the joists, is filled with it. It is considered very necessary to keep it wrapped under a thick coat of straw, sedge, or dry leaves. Should the straw next the ice become damp, be careful not to expose the ice to the air, but begin at one end, and let the damp straw be pulled out—and the next straw above, which is not only dry, but cool, be suffered to settle down on the ice. If you have more dry straw, let as much as was taken out wet, be brought and put on the top of the straw in the house—or let the damp straw be dried and sunned and then returned on top of the straw in the house. Never think of changing the whole mass of straw on the ice at one time, by bringing fresh straw from the barn yard—for this dry straw from the barnyard will always be of a much warmer temperature, than your ice, and will be sure to melt it very much.

The advantages of packing ice in the above mode, over the common method of pounding into small lumps, are many, and striking.—In the first place, if the ice be three inches thick, or more, it can be stowed quicker with the same hands.—Again, you can pack much more ice in the same space—my house that used to be filled with forty-eight ox cart loads of ice when pounded, has often taken in seventy of the same sized loads, when packed in the whole cake—and this will not appear at all surprising upon a moment's reflection. By *pounding*, you do not *pack* it; but infinitely multiply the pores and crevices—any miller knows, that a bushel of corn when pulverised, or ground into fine meal, will measure out not far short of a bushel and a half. Any woodcutter knows, that a cord of round logs, say a foot diameter, with the insterstices filled with small round wood, if the logs be split or mauled into marketable wood, will measure near a cord and a half fair measure. But Sir, I will give you an example exactly in point, and which, at least, any countryman can try.—Recollect, *pounding* ice is very far from *packing* it. It is not compressible like flour in a barrel under the action of the packer. Take an ear of corn, roll it in half a sheet of paper—let the paper come just even with the but, or large end of the year, and an inch or two beyond the small end—twist the paper at the small end, and tie it with a string all round, so that when the ear is drawn out, the paper will form the exact case of it. Draw the car, shell it, and return the grains into the paper case. If the ear is of the the gourd seed, or of a kind having long grains and a small cob, the grains which will lay packed exactly like the slippery hard pounded ice, will be found nearly to fill the paper case, notwithstanding the whole cob has been withdrawn.

If, sir, you are not now convinced that seventy loads of ice can be packed where forty-eight only will stow, when pounded—nothing need be said to attempt to convince you, that a mass containing the greater number of loads, will keep longer than one containing only the less number. But this is not all—when the ice comes into use, that which was packed is easily raised in large, native, solid, brilliant lumps, which will last more than twice as long, after being brought to the cooler, &c. as that which has been pounded.

I thought I would have given you the size and plan of a good cheap ice house, but I have already trespassed too far with the long story of my experience.

Your obedient servant,
CRŒSINUS.

THE CELEBRATED RACE HORSE ECLIPSE.

To those of our readers who are fond of fine horses, and of the sports of the turf as promotive of their improvement—it may be gratifying to know something of the pedigree and performances of the celebrated ECIPSE. We understand that an English noblemen, distinguished in the annals of the turf, has been prompted by the great achievements of this wonderful horse, to write to Mr. Van Ranst for the particulars of his family and his deeds. In the absence of more particular information, we here place on record some items gathered from an advertisement.

ECLIPSE

Will be six years old this spring, a *beautiful sorrel*, one white foot and star, fifteen hands three inches high, and exhibits more bone and muscle, and elegant symmetry of form, than any horse ever bred in the United States.

PEDIGREE.—Eclipse was bred by General Coles, from one of the first blood mares in this country, and sired by Duroc; his dam, Miller's Damsel, by Old Messenger; her dam, the imported English Mare Pot 8 o's, bred by Lord Grosvenor, sired by Pot 8 o's and Pot 8 o's by the celebrated horse Eclipse; her grand dam by Gimcrack; her great grand dam by Cripple, and Cripple by the Arabian of Lord Godolphin.

ECLIPSE, in May, 1818, when four years old, ran over the New Market Course the three mile heats, beating with ease, Mr. Van Mater's horse Sea Gull, and Mr. Correll's mare Black Ey'd Susan.—In June 1819, he ran the four mile heats over the New Course at Bath, beating Mr. Bond's horse Eclipse, Mr. Purdy's horse Little John, and Mr. Potter's horse Fitz-James.—In October 1819, he again ran the four mile heats at Bath, beating Mr. Purdy's horse Little John and distancing Mr. Schenck's horse Fear-Not, and Mr. Bond's colt, running the first heat in 8m. 13s. and the second heat in 8m. 8s. In all his running he never lost a heat, and when it is considered that the Bath Course instead of falling short, measures 15 links over a mile, the last running was truly great, and yet it was done with great ease.

THE TERMS.—*Five Pounds the Season*, to be paid, with the expense of keeping, when the mares are sent for and, in the character of *Mr. Thorn* and *Mr. Snedeker*, the public have an assurance that the best attention will be paid to the mares, but accidents and escapes at the risk of the owner. Insurance to be made by agreement.

C. W. VAN RANST.

New York, May 16, 1820.

Thus it appears that he can trace his pedigree through a line of "noble ancestry," up to the celebrated English Racer ECLIPSE—his great great grandsire—of *that* horse we have a portrait, and the following history, by LAWRENCE in his splendid work, entitled "THE HISTORY AND DELINEATION OF THE HORSE IN ALL HIS VARIETIES," which may be seen at the office of the American Farmer.

Eclipse, a chesnut Horse, foalded during the great Eclipse in 1764, whence his name, given by the Duke of Cumberland. Got by Marske,* out of Spilletta: she was got by Regulus, out of Mother Western, which was got by a son of Snake, brother to Williams's Squirrel, her dam by Old Montague, grand-dam by Hautboy, out of a daughter of Brimmer, her get not specified. Garrick, Proserpine, Briseis, &c. were full brother and sisters to Eclipse.

This famous Horse, which, with Flying Childers, stands proudly aloof from all rank or possibility of competition, was bred by His Royal Highness William Duke of Cumberland, uncle to his present Majesty, and purchased at the Duke's decease, by Mr. Wildman, who afterwards sold a part, and then the whole of him to Mr. O'Kelly. Mr. Wildman is said to have been, in some degree, aware of the worth of this colt, when a yearling, and to have taken the following measures, in order to make sure of him: When arrived at the place of sale, producing his watch, Wildman insisted the auction had commenced before the hour announced in the advertisement, and that the lots sold should be put up again. Rather than enter into a dispute, it was agreed by the auctioneer and company, that Mr. Wildman should have his choice of any particular lot, which exactly suited his purpose, and secured to him Eclipse, at the moderate price of seventy or seventy-five guineas. Previously to Eclipse's running for the King's Plate at Winchester, in 1769, Mr. Wildman sold the half of him to Mr. O'Kelly, for six hundred and fifty guineas, and afterwards Mr. O'Kelly bought the other half of him for eleven hundred guineas. Why Eclipse was withheld from the course, until five years old, I have never heard, but he was privately tried at Epsom, about that time; and indeed, it is impossible his proprietor could have remained so long unconscious of his vast powers. When I first saw him, he appeared in high health, of a robust constitution, and to promise a long life. I paid particular attention to his shoulder, which according to the common notion, was in truth very thick, but very extensive and well placed; his hinder quarters, or croup, appeared higher than his forehand, and in his gallop it was said, no Horse ever threw in his haunches with greater effect, his agility and his stride being upon a par, from his fortunate conformation in every part, and his uncommon strength. He had considerable length of waist, and stood over a great deal of ground, in which particular he was of the opposite form to Flying Childers, a short-backed compact Horse, whose reach laid in his lower limbs; and if there be any common sense in forming such a comparative judgment, I should suppose Eclipse calculated to excel over the course, Childers, for a mile. Eclipse was an excellent, but thick-winded Horse, and breathed hard and loud in his exercise. When viewed in his flesh, as a stallion, there was a certain coarseness about him, but a critical eye could discover the high bred Racer in every part.

Eclipse won eleven King's Plates, the weight for ten of which was twelve stone, the remainder ten. He was never beaten, never had a whip flourished over him, or felt the tickling of a spur, or was ever, for a moment, distressed by the speed, or rate of a competitor; out-footing, out-striding, and out-lasting, every Horse which started against him. His proprietor acknowledged that he gained twenty-five thousand pounds by Eclipse. In twenty-three years, three hundred and forty-four winners, the progeny of this transcendant courser, produced to their owners, the sum of £158,047 12*s*. various prizes not included. The general character of the descendants of Eclipse is speed, although some, both immediate and remote, have been remarkable for their stoutness or game; for example, Lord Surrey's Whizgig, and the present celebrated stallion Gohanna, by Mercury, the best four-mile horse of his day. Many of the Eclipses, I remember, bent their knees, and were remarkable high-goers.

* * *

A vineyard of Mr. Eichelberger, in York, Pennsylvania, contains ten acres, covered with vines of Lisbon, white and other grapes. He will make 40 barrels of wine this season, and he intends to extend his vineyard to 20 acres next year.

* * *

FOR THE AMERICAN FARMER.

DEAD FENCES—VERSUS LIVE ONES.

Your friends, Messrs. Kirk and North, having engaged in this controversy, it may possibly be deemed an invidious task for a third person to take a hand; and the man who dares thus to volunteer, will probably fare no better than the unlucky wight who intermeddles in a dispute between husband and wife. Be this as it may, the subject being of general interest, and the business of live hedging in many parts of our country, threatening to become a hobbyhorsical affair, I will, at all hazards, contribute my mite towards preventing the expenditure of too much time, labour, and money in the attempt to render this mode of inclosure, general. The account between the two systems, I think may be fairly stated thus:

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* *I will, in this place, speak a few words on the pedigree of the renowned Eclipse. It has always been taken for granted, that he was a son of Marske, a fact, beyond the power of man to ascertain. Eclipse's dam was covered both by Shakespeare and Marske, and she came to Marske's time, so the honour was awarded to him. If I recollect aright, she had missed by him the previous year. But the circumstance of a mare coming regularly to her time, determines nothing, since they are so uncertain in that respect, in which I have repeatedly known variations from a week or ten days, to two or three weeks. Great stress was laid upon the supposed likeness of Basilius, one of the earliest sons of Eclipse, to old Marske, and indeed the resemblance appeared to me strong; but I could discover no common family-resemblance between Eclipse and his presumed full-brother Garrick. On the other hand, I think Eclipse strongly resembled the family of Shakespeare, in colour, in certain particulars of form, and in temper. Nothing can be more unimportant than these speculations, and Eclipse's pedigree would suffer no loss of honour or credit, should Shakespeare be placed at the head of it; which horse had more of the Darley Arabian in him, than Marske, and in all respects, was equally well-bred, and full as good a runner. Shakespeare, like Marske, was a great-grandson of the Darley Arabian, through Hobgoblin and Aleppo, and his dam the little Harteley mare; the dam also of Blank, was a grand-daughter of the same Arabian, and out of the famous Flying Whig. One or two of the sons of Eclipse, yet alive, appear to me strongly to resemble the Shakespeare.*

It is necessary, however, to subjoin the late intelligence on this subject, with which I have been favoured by Mr. Sandiver, of Newmarket, which goes to assert, on the authority of the stud-groom, that Eclipse's dam really never was covered by Shakespeare. On this I can only observe, that in the year 1778, *I was frequently in the habit of visiting Old Eclipse, then at Epsom, on which occasions I often discoursed the subject of the disputed pedigree, with Colonel O'Kelly's then groom, who assured me that the mare was covered by Shakespeare, which account I also had from various other persons, as a well-known fact. And to conceal nothing, it had been reported, that a groom had been bribed to ascribe the get of Eclipse to Marske, there being a strong interest in the reputation of that stallion. I have no doubt, but Mr. Vauxhall Clarke will recollect this report. The reader will observe in the annexed plate, the two horses together, and will judge for himself, as far as resemblance may be supposed to determine. Both horses are shown in a racing condition, but Shakespeare, why, I know not, appears full of flesh, and in such state, was much resembled by Eclipse, whilst that Horse was in his loose stable as a stallion.*

Live fences take from cultivation, all the land upon which they grow; say, a space at maturity, (even from what Mr. Kirk calls a hedge-proper,) of not less than 5 or 6 feet. And they impoverish the earth on each side, to a distance, at least 5 or 6 feet more.	Dead fences impoverish not a particle of soil. and cover at most, not more than 9 or 10 inches in breadth.
Live fences are an annual expense forever; great or small according to the part of the country in which they are made, but considerable every where.—It consists of the following items; *a dead fence* and *generally a ditch to guard the live one*, for at least 4 or 5 years, and often 7 or 8; manuring, unless in very good land, planting, cultivating for 3 or 4 years, and pruning every year after it rises a few feet in height, as long as it lives.	Dead fences cost nothing, (there being no market for timber in most parts of our country,) but the preparation of the posts and rails, and putting them up, which can be done by almost any common labourer. And, if made of locust and red cedar, either singly or mixed, they will last from 15 to 25, or 30 years, without one cent's worth either of labour or money being expended on them. A common worm fence is still cheaper in regard to labour, and when made of chesnut or white oak will last 10 or 15 years.
Live fences (unless made of holly, which requires 15 or 20 years to gain sufficient size,) are subject to various diseases, that often kill considerable portions of them; and the breaches must be repaired either by a *dead fence*, or by setting other plants which are many years in acquiring the requisite size and strength to stand alone without their *dead protector*. Add to this the well known fact, that young plants never thrive well between old ones.	Dead fences are liable to no disease whatever, but a natural decay, very long delayed; and a few days work repairs all the damage.
Live fences under the best possible management—in the best land, are never above an adequate protection in less than 7 or 8 years; and in general, are 12 or 14 years in acquiring sufficient strength.	Dead fences can be made in a few weeks, and are as effectual the moment they are planted, as they ever are afterwards; requiring no guardian to protect *them* during a helpless minority.
Lastly, and irremediably; live fences are *immoveable*, which in the continually fluctuating state of our farms, as respects size and form, necessarily produced by our law of descents in conjunction with public sentiment, constitutes a permanent and insuperable objection to them as a general system of inclosure in most, if not all of the United States.	Dead fences need only a few days transportation to be changed from place to place, as often as interest, convenience, or fancy may dictate.

These remarks, Mr. Editor, are not the conjectural estimates of a mere theorist, but of one who, although no cultivator of live hedges, (except on a small scale and in a single case,) has seen many of them in different parts of our country, and taken considerable pains to inform himself in regard to the advantages and disadvantages of all the different modes of inclosure practised in the United States. The result of my enquiries and reflections is, that live hedges are no where to be preferred, unless perhaps in the most thickly populated parts of our country, where timber is both very scarce, and very dear. As ornaments and protections from theft for fruit gardens, I should also admit that where full grown, they are better than dead fences.

In making a comparison between the two, the only fair way is, to determine—not what *might*, but what *would* be the state of live hedges, were they to become general. It is therefore *unfair* to conclude, that because Mr. Kirk, an excellent manager of hedges, an industrious, careful, persevering man; one too, who appears to take a very natural and laudable pride in the business, has succeeded, consequently every body would succeed. We know the contrary to be the fact; and I would go no farther than his own State, (the hedges of which I have several times seen,) to prove it, then for our "hedges proper," as Mr. Kirk very properly calls it, you will see 20 "hedge rows," as he very *improperly* terms them, for there is no row at all on considerable portions of space designed to be occupied by the hedges.—Even in England, I am well informed that this is frequently the case; and that the proportion of "hedges proper," to "hedge rows," is very small indeed, compared to what we should expect, if we consulted only the panagerists of English hedges. I take this fact from Marshall and other English writers on husbandry; as well as from several observing friends who have travelled over England. Let it not be said that this arguing against the use of a thing from its abuse; for it is not only a sound, but unanswerable argument, where the abuse is continually much more frequent, than the good use.

The last objection stated in my contrast, is peculiar perhaps to our country, but never likely to be removed. The law of entails which had a powerful tendency to keep landed estates together, has been abolished with us not quite 50 years I believe; yet in co-operation with the public sentiment which produced it, so effectual has been the operations of the *repaeling* law, that in Virginia at least, there is scarcley a single fence, unless along a public road, which remains where it did, when I was a boy. The same proprietor rarely ever retains the same farm in the same shape, long enough to raise live hedges exactly where he wants them, for he either augments it by purchase, or diminishes it by sales, which is more commonly the case, in such a way as to render a frequent change of inclosure absolutely necessary. But should the size and form continue the same during the father's life, which they very seldom do, both are immediately changed, when the farm comes to be divided among the children, who always have to *undo* and alter the greater part of what the father has done in the way of fencing.

A word or two on Mr. Kirk's comparative estimate of costs: however accurate they are for his own neighbourhood, I know them to be incorrect in regard to many parts of our country.—But the question is, not what hedging costs *him* and *his neighbours*, but what would it cost the people of the United States generally, if every proprietor of land should choose to make living, instead of dead fences. I know also that locust, red cedar, chesnut and white oak grow well in a great majority of the States: and I have experimental knowledge that the two first, if planted along a post and rail fence, in tolerably good land, one at each pannel, will attain full size for posts and rails long before the first fence requires to be renewed. The locust will live upon transplanting as readily as a cabbage plant, and needs only one or two slight prunings. It grows also, rapidly from the seed, and is the most durable wood known in our country, 30 and 40 years being a common period for posts to continue sound, if well selected. Red cedar is also very durable, and may easily be raised either by transplanting with a sod about the roots, or from seed having their resinous skin either broken, or partially rubbed off.

To conclude, whatever may be thought of the foregoing remarks I claim for them, at least the merit of impartiality: for I have no personal knowledge either of Mr. Kirk or Mr. North; and have neither pride of opinion, hobbyhorsical predilection, nor pecuniary interest to serve by any thing that I have written.

As my name can be of no importance to any body, I subscribe myself, your constant reader and friend.

CUI BONO.

PETERSBURG, Va. Oct. 15.—Our races commenced yesterday with the $1500 sweepstake for three years old only, and was won by General Winn's Elizabeth, full sister of Rattler and Childers—beating Mr. Johnson's Defiance, and Mr. Harrison's Arab—Defiance took the first heat. Time 3 53—3.57 and 4.

Second day's purse of $300—3 mile heats, was won by Mr. Johnston's Washington, beating Mr. Harrison's Tyro. Time 5.48—5.53½.

To-morrow, John Richards and Betsey Richards, are to run—a great race is expected—betting even.

General Winn has arrived at Baltimore with Childers, Sumpter, and Vanity: afterwards will attend the races at Washington.

Mammoth Beets.—Were raised this season, in the garden of Daniel Schnebly, Esq. in Hagerstown, Maryland, twenty beets, which averaged upwards of ten pounds each; the heaviest weighed fourteen pounds, and measured thirty-two inches in circumference.

Good News for Cotton Dealers.—We learn that letters were received in this city by the John Wells, dated Liverpool, September 8th, which inform, that on that day there was a brisk demand for cotton by the manufacturers, and that holders demanded an advance of a farthing per pound upon the prices of the 6th.

PATERSON, N. J. OCT. 8.—*Extraordinary product.*—Mr. Jacob Berry, of Pompton Plains, authorizes us to give the following statement of an extraordinary product from one grain of Corn. It came up in the month of May last, but being nipped by the frost, was cut off level with the ground with a knife. It sprouted again soon, and produced five stalks, besides the main one—four of which had two ears of Corn a piece, and the main stalk had four; one stalk nothing. The whole twelve ears yielded one quart and one pint of shelled Corn, heaped measure, making in all three thousand seven hundred and ten grains from the one grain.

RICHMOND, VA. OCT. 14.—It rarely occurs in our climate, that the same fruit tree bears two crops in one year. On the 12th inst. however, we met with an instance of this description. A soft-peach tree has ripened its fruit twice this year in a garden near this city. The last peaches were, of course, very small; but they were very sweet. The stones were of the Lilliputian order, without kernels. In the same garden, there are a number of blossoms on the pear trees; but it is remarkable, they are all upon those branches of the trees which are technically said to be ravished; that is, the bark of which has been cut around to force the ripening of the fruit in the Spring. This process, however, has shewn its effects this fall in the way we have mentioned. Blossoms have put out, and some young pears formed; but the early frost will most probably nip all the fruit.—*Enquirer.*

COFFEE POT.

The following description of a newly invented coffee pot is from the New Monthly Magazine.

Ingenious and useful Invention—Among the new inventions for which Paris is famous, is a coffee pot constructed of three pieces; the first is a plain boiler—over that is a double filterer—and at the top is an inverted coffee pot, which fits on exactly. Cold water is placed in the first vessel, and the coffee in the filtering box. Under the whole is a spirit lamp, which in the course of five or six minutes causes the water to boil, the vapour arising from which completely saturates the coffee. When the water boils, which is ascertained by the discharge of the vapour from the spout of the inverted coffee pot, the whole machine is lifted from the lamp, and completely inverted—so that the pot, which was uppermost, is at the bottom, and the boiling water, which had saturated the coffee, flows through the filterer, clear, into what was before the inverted coffee pot, which in the space of two minutes it is ready for use. This mode of preparing coffee is a saving of at least 25 per cent. and it secures the fine flavour of the berry. In another part of the service is a coffee roaster, of glass, over another lamp of a long wide flame. The process of roasting requires about three minutes, and even so small a quantity as an ounce may be thus prepared.

* * *

Progress of Printing, &c.—In the English Parliament, the annual motion for reform in the representation had been made by Lord John Russell, and negatived by a vote of 269 to 164. The result was received with loud cheering by the opposition, as showing an accession of strength to their cause. In the course of his speech, Lord Russel, stated several facts to show the improved state of all classes from the increased means of instruction, and the propriety and justice of giving to the mass of population a representation proportioned to its increased relative weight and improvement. He stated, as among the results of his inquiries into the extension of the means of instruction, that the sales by one bookseller's house in London, amounts to £5,0000,000 sterling, (upwards of $22,000,000,) worth of books; that they employed sixty clerks, paid £5,500, for advertisements, and gave constant employment to no fewer than 250 bookbinders. The increase of circulating libraries had also been very great, there being about 1000 of those establishments in the kingdom, and from 1500 to 2000 marts for the sale of books distributed throughout the country; in addition to all which was the quantity of newspapers annually distributed, the number of which, for the year 1821, he estimated at 23,000,000, and of those 11,000,000 were London daily papers; country papers, 7,000,000. The increase of presses in 40 years had been from 79, the whole number in 1781, to 284, in 1822; yet with a population of 18,000,000 so provided with the means of knowledge, a majority of the representation in the Parliament was returned by less than 8,000 electors.

* * *

Children's Food.—A lady of Yorkshire observes, in a letter dated May 2, that, in consequence of her losing her first three children, one during teething, and two of inflammation in the bowels, she gave her fourth child a little lime water in every article of food, adding a dessert, and sometimes only a teaspoonful of lime water to every article, whether liquid or thick. It succeeded in keeping up healthy digestion, and a regular state of the bowels: the child, instead of being feverish, flatulent, and fretful, as all her preceding children have been, continued cool and cheerful, free from any system of indigestion, and cut its teeth without any constitutional disturbance. She has continued this practice with two or more children with the same good effects. We have known this simple addition to the food of children, prove very efficacious in incipient cases of rickets and of irritable bowels, attended with looseness, &c.: but if the child be disposed to costiveness on account of its astringent quality, a little magnesia should be occasionally added to it.—*Gazette of Health.*

* * *

A very healthy old gentleman was once asked, in a mixed company, what physician and apothecary he employed, in reference to the unusual vigor and healthiness of his appearance; he answered, "I have in my earlier days, expended a considerable fortune in the purchase of health, and in the continual search after professional skill and integrity. I have found it in combination as various as its professors are numerous; but I have in no case found myself so honestly served, or so completely satisfied, as with those I have employed the last twenty years; for, during that time, *a horse* has been my physician; *an ass* my apothecary.

* * *

Cramp.—Extract of a letter to the Editor of the Gentleman's Magazine for May, 1762, containing an easy remedy for the cramp:—"Near five years ago, being from home, and obliged to lie upon a very hard bed for two nights, though I could not sleep the first night through the uneasiness of my lodging, yet I had no cramp. The second night I slept well, but no cramp. The loss of my old tormenting companion for two nights together, a circumstance I had not experienced for years before, set me on thinking what could be the cause. I could not recollect any other alteration in my manner of living than passing from a soft bed to a hard one, I therefore imagined that that might be the cause; and likewise reflecting that this disorder almost always make its attack in the night, I guessed it must, in a great measure, proceed from the unnatural position of the body in a soft bed, where the body sinks down and the feet rise up. I immediately set my joiner to work, and made my bedstead regularly sloping, so that there was about a foot difference in height between the head and the feet. I likewise put a hard mattrass upon the bed; my project succeeded, and (I thank God) I immediately got rid of my grievous pain, which I have not felt since, near five years, unless a few times, when, through mistake of servants, the feathers of the bed were left too full at bottom, and, by that means, the feet raised higher than they should be. If this should be looked upon by the learned as trifling, yet 'facts are stubborn things,' and will not bow down to the most learned and ingenious hypothesis. It may be necessary to add, that as the bed slopes so much, something ought to be fixed at the bottom, for the feet to rest against."

* * *

New Process in Tanning.—We have heard Tanners, of intelligence as well as experience, speak highly of the mode of tanning leather, advertised by Mr. Charles Monroe, of Northborough. It is said that leather may be tanned by his process, in ten or twelve days, as well as it is in the more tedious method now practised. We understand some specimens of leather, tanned in this way, will be exhibited next Wednesday.

* * *

Hops.—The growth of Hops in England is said to have nearly wholly failed this season. We understand, that the growth in this State has been heavy, and turns out well. The reputation of Massachusetts hops stands high in Europe—thanks to the fidelity with which our Inspection Laws are executed. We learn, that more than a million pounds weight are annually raised in this State, and principally in the county of Middlesex.

NETTLES.

Every body knows that the leaves of stinging nettles are thick set with sharp prickles that penetrate the skin when touched, and occasion pain, heat and swelling, which symptoms were imagined formerly to ensue from the prickles being left in the wounds they made. But the microscope discovers something much more wonderful in this common vegetable, and shows that its prickles are formed and act in the same manner as the stings of living animals. Every one of them is found to be a rigid hollow body, terminating in the most acute point possible, with an opening near its end. At the bottom of this cavity lies a minute vessel or bag, containing a limpid liquor, which upon the least touching of the prickle, is squirted through the little outlet and if it enters the skin, produces the mischief before mentioned, by the pungency of its salts. Hence it comes to pass that when the leaves of nettles are considerably dried; by the heat of the sun, they sting but very little: whereas such as are green and juicy produce violent pain and inflammation.—*N. Y. Minerva.*

Editorial Correspondence.

Extract to the Editor, dated Charleston, September 22, 1823.

"I paid a visit to my plantation the day be-
"fore yesterday, and found the Isle of France
"cotton beginning to throw out forms, from
"whence come the blossoms, which makes it too
"late to bring any thing of consequence. We
"are now harvesting our rice and cotton crops—
"a more plentiful one I never saw."

* * *

To the Editor of the American Farmer, or to any person who has any information on the subject.

A dreadful malady has appeared among the cattle in Talbot on two different farms. The animals are seized with a muscular or nervous catching, that resembles hiccoughs, when the complaint seizes them in the head, which it chiefly does; but some have been affected behind, some in one leg, some in the chest, and some across the loins—the catching increases—the part affected is hot and appears to itch so violently, that they soon rub all the hair off, and lacerate the flesh—they appear to have high fever; take to the water; and can be with difficulty kept out of the creeks. They appear costive, and die in 24 or 36 hours—bleeding, purging, medicine and Antispasmodic balls have been tried without any success.—*Easton Gazette.*

The Editor solicits the immediate attention of his correspondents to the above, and will himself investigate the subject, by all the means in his power. In the mean time he sends to the gentleman, whose losses dictated the paragraph, the latest treatise on the disorders of cattle, which he begs him to accept.

The symptoms, as here described, seem to indicate a disease arising from some incidental, or local, rather than general or epidemic influence. It is probable, in other words, that some poisonous seeds, or other vegetation are developed at this season, in particular places, or by the peculiar weather, to cause such effects; which are, in this instance, more conformable to the symptoms of poisonous *diet*, than those of *infected atmosphere.* This view is taken from a comparison of the general aspect of symptoms, as described by authors, in those two conditions of disease, arising from the one or the other of those sources. The remedy in the present case would be, to shut up the cattle, and to treat those affected, by evacuating the stomach and bowels, as quickly as possible, and drenching copiously with mild diluents, as flax seed and melon seed tea—horse radish added, would probably counteract the effects of poisons, in producing cramps, as they usually do, in the stomach and limbs. Any one attentive to these subjects, could readily perceive why a poison taken *into the stomach* should act differently on the system, from one taken by *breathing* or *infection* :—the former disturbing the digestive organs first, and causing some other local affections, by their peculiar influence on particular organs—the latter, more general, causing coldness and fever, debility, thirst, costiveness, &c. before the stomach and brain are much disturbed, such being the difference between atmospheric exhalations and poisonous food. If they proceed, even in the present instance, from the former cause, the shutting them up would exclude them from the more direct influence of the cause, morbid exhalation, and besides, would tend to obviate its influence by a more tonic or bracing diet. In either case, the itching and heat of the skin, would indicate a want of transpiration at the surface—or morbid humour thrown there, which the free internal use of sulphur, say one ounce, three or four times a day, would counteract in a warm place, with the flax seed, &c. as stated above, especially after the passages were evacuated. The malady is indeed a serious one, as will appear by the following extract to the Editor:—"Since Thursday week, I have lost eight of my grown, and most valuable cattle—my pet cow Europa—5 working oxen and another one of the finest spirited animals that ever bowed his neck to the yoke, is now sick!"—*Edit. Am. Far.*

* * *

FOR THE AMERICAN FARMER.

OIL FROM COTTON SEED.

I find among my memorandums that in the year 1806, I imported from Charleston nine bushels of cotton seed, weighing forty four pounds per bushel, on which I caused an experiment to be made to ascertain the quantity of oil it would yield by the process usually practised in extracting oil from flax seed. The result was that the nine bushels produced six and a quarter gallons of clear oil of a quality quite equal, if not superior, to flaxseed oil for painting—the seed was not of the best quality, nor was the experiment very perfectly made. T. E.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Smith's Inspection Warehouse, Baltimore, during the quarter, commencing on the first day of July, in the year eighteen hundred and twenty-three, and ending on the thirtieth day of September, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	1272	33	21	1305
Number delivered.				1338

RODK. DORSEY, Inspector.

TREASURY OFFICE, ANNAPOLIS, Oct. 11, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco Inspected at and delivered from Nottingham Inspection Warehouse, during the quarter, commencing on the first day of July, in the year of eighteen hundred and twenty-three, and ending the thirtieth day of September, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	468			468
Number delivered.	333			333

BADEN & BOSWELL, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Oct. 11, 1823.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

Queen Anne, October 6, 1823.

A report of the tobacco inspected at and delivered from Queen Anne Inspection Warehouse, during the quarter, commencing on the eighth day of July, in the year eighteen hundred and twenty-three, and ending on the sixth day of October in the year eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	109			109
Number delivered.	336			336

WELLS & TYLER, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Oct. 15, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

* * *

From the Salem Observer.

ENCOURAGEMENT OF MANUFACTURES.

It is a wise policy in a government to furnish employment for all its subjects. Yet no advantage is gained by crowding persons into trades, occupations or professions which are already sufficiently full. But, when a new field for industry and enterprise is opened, this redundance of the body politick is removed; the supernumeraries are drawn off from the various occupations; each individual finds full employment at reasonable wages; all the various classes of society increase at the same time, preserving their proportion to each other; and the country makes a regular and uninterrupted advance in wealth, population, refinement and happiness.

These considerations, if founded on truth, afford a plain direction in relation to the measures which a government ought to adopt, with regard to the admission of foreign manufactures. If the country is capable of producing the raw material in the greatest abundance, and, besides, furnishes every natural facility for manufacturing; if there are thousands of people sitting still for want of employment; if there are thousands of others, who *merely overstock agriculture*, and the other various occupations of society, keeping down the prices of every thing, from a vain attempt to sell what there is no demand for, and ruining each other by clogging and embarrassing business; then, notwithstanding the low price at which the surplus produce of a foreign market may be afforded, it is the dictate of sound policy to lay such a duty on it, that the people may be encouraged to engage in manufactures.

This is apparent from two considerations: 1. Because such a policy would relieve the other occupations, of their supernumeraries. 2. Because, in this, all the various classes of society would be able to make a living with the profits which they would derive from supplying each other, with the respective products of their industry.

It is very disheartening to be obliged to bestow labour in producing or manufacturing when there is little or no demand for the product; or when it becomes necessary to make great sacrifices in the price of a commodity to secure the sale of it, or anticipate competitors in the market. And lowering the price will not relieve the dealers *as a body*—for though those individuals who sell cheapest will sell first, those who ask a high price will not sell at all; and if all set a low price on their goods, yet they will not all be sold, unless absolutely sacrificed. For *the extent of the demand for consumption will remain the same, whether the price is cheap or dear.* For instance, if the regular demand of the market, is for 1,000 of a particular article, and the supply regularly consists of 1,100, the consumers will buy 1,000 cheaper or dearer, and will buy no more, cheap or dear. If those 1,000 are worth $100,000, when the supply and demand are equal, then when the demand is for 1,000, and the supply is 1,100, the 1,000 will bring less than $100,000, the 100 will not be sold at all in the home market for consumption. Thus every kind of business, will be found to be like a boat, which will carry a certain number with safety, but if more will embark, it is not merely the supernumeraries who will sink, but if they rashly stick to it, and hold out against each other, they must all drown together.

From such a state of embarrassment it would be very difficult to free the country in any other way than by encouraging home manufactures.

Selections.

Conversion of Animal-Hides or Skins into Leather.

This process is what is generally termed *Tanning*. It is founded on the affinity which is known to exist between the gelatinous part of the Hide, and the *Tan* or astringent principle of Oak bark, and other vegetable substances.

It is well known that unless Hides are speedily dried, they become putrid, and consequently unfit for use. But even although they be successfully dried, they are still unfit for the manufacture of shoes or other necessary articles; being permeable to moisture, and liable to be soon destroyed by friction. Consequently in almost every country where animal hides are used for purposes of convenience, they are made to undergo certain modes of treatment, which render them not only impermeable to water, but also tougher, and more pliable, so as to be easily and advantageously worked.

The combination of the Vegetable Astringent principle, or Tannin, with the gelatine (which forms almost the whole of the hide,) changes it into leather, which is a substance totally different in its properties to the hide in the raw state. To tan a hide then is to saturate it with Tannin.

Previous to the operation of tanning, the raw or green hides must undergo the process of washing and scouring, to free them from foreign matter, and to remove the hair. Hides are first put to steep in water, either pure or acidulated, to clear them of the blood and filth they may have collected in the slaughter-house. They are left to soak in the water for some time; and then *handled*, or trod upon by the feet, the better to cleanse them of all impurities. If the hides are dry they are steeped a longer time, sometimes for four days or longer, according to the season of the year, and care is taken to draw them out once a day, in order to stretch them on a wooden horse or beam. These two operations are repeated till the skin becomes raised or well softened. A running stream is necessary in these operations, else the hides cannot fail of being ill prepared.

When the hides have been well raised, and softened, they are next freed from the hair, by the application of lime. In all tanneries, pits are formed having their sides lined with stone or brick, in which limestone is slacked, so as to form *milk* of lime. Of these there are three kinds, according to the strength of the lime. The hides intended to be scoured are first put into the weakest of these pits, wherein they are allowed to remain, until the hair readily yields to the touch.

If this liquor be not sufficiently active, the hides are removed to the next in gradation, and the time they have for soaking, is longer or shorter, in proportion to the strength of the lime, the temperature of the air, and the nature of the hides. Those of sheep require to remain in the pits only a few days. It has been proposed to substitute *lime water* in place of the milk of lime. But though the lime water acts at first with sufficient strength, its action is not sufficiently permanent, and in order to succeed in clearing the hides, it is necessary to renew it occasionally. In some tanneries, after the hides have been kept in the pits for a short time, they are piled up in a heap on the ground; in which state they are suffered to remain for eight days, after which they are returned into the same pits from whence they were taken, and this process is repeated till the hair can be easily scraped off.

Hides may also be cleansed, by subjecting them to an incipient fermentation, produced by scouring a mixture of barley-flour in warm water, and soaking the hides in it, till they are sufficiently swelled and softened to admit of being cleared from the hair. In each tan house are placed several tubs full of this acid liquor, which is of different strengths in proportion as it is soured. In those containing the weakest liquor, the hides are first soaked, handled, and washed; and after two, or at most, three of these operations, they are sufficiently prepared to admit of being freed from the hair. If more easily procured, rye flour may be substituted for barley.

The Calmuck Tartars employ sour milk with the same view, and Pseiffer proposes the use of the Acid water obtained from the distillation of Coal and Turf. It indeed appears sufficiently ascertained, that all the vegetable acids, and even diluted Sulphuric Acid, answer equally well for this purpose.

In some tanneries, they cleanse the hides by throwing salt over one-half of the skin, and doubling the other half over it; in proportion as each hide is salted, they are laid one above another, and the whole are covered with straw or flax; fermentation soon begins, after which they are turned once or twice daily, until they are found to be in a proper state for removing the hair. They may be cleansed, however, much in the same manner, without the employment of salt, by piling them up on a bed of litter, and covering them with the same material for twenty four hours. At the end of this period they are turned over, and afterwards examined twice a day, in order to ascertain when the hair may be readily removed.

In some tanneries the hides are buried in dung, while in others, they are simply exposed in a close apartment, termed a *smoke house*, heated by means of a tan fire, which gives out smoke without flame. The hides are suspended on long poles placed across these apartments, which are heated very considerably.

All the methods in which fermentation is employed, are termed *heating processes*. In whatever manner this operation has been conducted, as soon as the hair is in a fit state to be removed, it is scraped off, on the wooden horse, by means of a blunt knife, or by a whet-stone. This operation is not only intended to remove the hair, but likewise the Scarf-skin or Epidermis, which is of a very different nature from that of the true skin. It is insoluble in Water, and Alcohol; is soluble in Acids, but not susceptible of combination with Tan, so that when left on the hide the Tan can only penetrate through the under side, by which means the process of Tanning is rendered extremely tedious.

There are many vegetable substances which possess the tanning principle, or Tannin; but those which possess most, are the oak, alder, willow, and Peruvian bark, also the gall nut.—The Peruvian bark from its scarcity and high price, is only used in Medicine. As oak bark possesses more tan than any other vegetable substance, it is generally used for Tanning.—This bark, being stripped from those trees which are cut down in the Spring of the year, is dried in covered heaps, in the open air. It is then ground to a coarse powder in a mill, and mixed with water in the Tan-pits. The infusion, or liquor, which is of a brownish Amber colour, is called *ooze*; but is, properly speaking, a solution of Tannin and other vegetable matters.

The Hides, being scoured, raised, and softened, are first subjected to the action of weak *ooze* in one of these pits: here they remain for several weeks, and in the interim, are frequently agitated, or *handled*. From thence, it is removed to a pit containing a stronger infusion, where it remains for a considerable time; that is, until it has absorbed all the Tan. It is now immersed in a still stronger infusion, and so on. When the Hide has attained the colour of Cinnamon bark on its outside, and when its internal parts are equally brown when cut through with a knife; it has received its full dose of Tan, and is converted into Leather. But if a white or greyish streak appear in the centre of the Hide or Skin, it is to be again immersed in the Tan-pit. Calf-skins require only about two or three months before the process of tanning is finished, whereas Ox-hides are not perfectly converted into Leather, for 6, 8 or even 15 months.

When perfectly tanned, the hides are taken out, drained, passed between two Iron cylinders. that they may become pliant, and are then hung up in a drying house, until they become perfectly dry by exposure to the air. The smaller hides now undergo the operation of *currying*, which renders them pliant, and reduces them to an uniform thickness. This consists in cutting, soaking, paring, scouring, stretching and oiling. The Leather is then blackened by a composition of lamp-black, oil, and tallow, which is rubbed hard into the fleshy side. It is now fit for sale.

Observations. It is to be observed, that leather would be tanned much sooner, and equally well, if the tan-pits were made *within* a building so as to be secured from rain: and if the building were furnished with flues or steam pipes, so as to keep the temperature of the vats constantly at a full summer heat. Another important improvement might be made in tanning, if the skins were hung vertically in the pits, so that the tanning liquor might, from the first part of the process, touch every part of the skin equally.

German mode of curing Hams.

In Westphalia, Hams are cured between November and March. The Germans pile them up in deep tubs covering them with layers of salt, saltpetre, and a small quantity of Bay-leaves. In this situation they let them remain about four or five days, when they make a strong pickle of salt and water, with which they cover them completely; and at the expiration of three weeks they take them out of pickle, soak them twelve hours in clean water*, and hang them up for three weeks longer in a smoke made from the *juniper bushes*, which in that country are met with in great quantities.

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* This accounts for the freshness always observable in Westphalia Hams.—*Edit Am. Far.*

Successful Method of curing Butter, as practised in Scotland.

It is well known, that butter as it is generally cured does not keep for any length of time, without spoiling or becoming rancid. The butter with which the metropolis is supplied, may be seen at every cheesemongers, in the greatest *variety of quality and color;* and it is too often the case, that even the worst butter, is compounded with better sorts in order to procure a sale. These practices are detestable, and should be discountenanced by the legislature. Indeed no butter should be permitted to be sold, but such as is of the best quality when fresh, and well cured when salted; as there is hardly any article more capable of exciting disgust than bad butter.

But to obtain a reform in this matter, it is necessary to commence with the practices of the dairy; and the following process is recommended as the best at present known: Reduce separately to fine powder in a dry mortar, 2 pounds of the best, or whitest common salt; 1 pound of Saltpetre; and 1 pound of Lump Sugar. Sift these ingredients, one above another on two sheets of paper joined together; and then mix them well with the hands, or with a spatula. Now preserve the whole in a covered jar placed in a dry situation. When required to be used, one ounce of this composition is to be proportioned to every pound of butter, and the whole is to be well worked into the mass. The butter is to be packed in casks, &c. in the usual way.

Observations. The above method is practised in many parts of Scotland: and is found to preserve the butter much better, than by using common salt alone. If butter made at one time be divided into two parts, and one be salted in the common way, while the mixture abovementioned is worked into the other, the difference in the quality of the two, will be found to be beyond al. conception.

The butter cured with this mixture appears of a rich marrowy consistence and fine color, and never acquires a brittle hardness, nor tastes salt; the other will be comparatively hard and brittle, approaching more nearly to the appearance of tallow, and is much salter to the taste. Butter cured by the above composition has been kept three years, and was as sweet as at first; but it must be noted, that butter thus cured requires to stand at least three weeks or a month before it is used. If it be sooner opened, the salts are not sufficiently blended with it, and sometimes the coolness of the nitre will then be perceived, which totally disappears afterwards.

One more observation on the preservation of butter is necessary. It is universally allowed that cleanliness is indispensible, but it is not generally suspected, that butter from being made in vessels or troughs lined with lead, or in glazed earthen ware pans (which glaze is principally composed of lead) is too apt to be contaminated by particles of that deleterious metal. If the butter is in the least degree rancid, this can hardly fail to take place, and it cannot be doubted, that during the decomposition of the salts, the glazing is acted on. It is better therefore, to use tinned vessels for mixing the preservative with the butter, and to pack it either in wooden vessels, or in jars of the Vauxhall ware, which, being vitrified throughout, do not require an inside glazing.

* * *

SURNAMES.

Men once were surnamed from their shape or estate,
(You all may from history worm it,)
There was Louis the Bulky, and Henry the Great,
John Lackland and Peter the Hermit.
But now when the door plates of Misters and Dames
Are read, each so constantly varies
From the owner's trade, figure and calling, Surnames
Seem given by the rule of contraries.

Mr. *Box*, though provoked, never doubles his fist,
Mr. *Burns* in his grate has no fuel,
Mr. *Playfair* won't catch me at hazard or whist,
Mr. *Coward* was wing'd in a duel.
Mr. *Wise* is a dunce, Mr *King* is a whig,
Mr. *Coffin's* uncommonly sprightly,
And huge Mr. *Little* broke down in a gig
While driving fat Mrs. *Golightly*.

Mrs. *Drinkwater's* apt to indulge in a dram,
Mrs. *Angel's* an absolute fury,
And meek Mr. *Lyon* let fierce Mr *Lamb*
Tweak his nose in the lobby of Drury.
At Bath, where the feeble go more than the stout,
(A conduct well worthy of Nero)
Over poor Mr. *Lightfoot* confin'd with the gout
Mr. *Heaviside* danced a Bulero.

Miss *Joy*, wretched maid, when she chose Mr. *Love*,
Found nothing but sorrow await her:
She now holds in wedlock, as true as a dove,
That fondest of mates, Mr. *Hayter*.
Mr. *Oldcastle* dwells in a modern built hut;
Miss *Sage* is of madcaps the archest;
Of all the queer bachelors Cupid e'er cut,
Old Mr. *Younghusband's* the starchest.

Mr. *Child* in a passion knocked down Mr. *Rock*
Mr. *Stone* like an aspen-leaf shivers;
Miss *Poole* used to dance, but she stands like a stick
Ever since she became Mrs. *Rivers*.
Mr. *Swift* hobbles onward no mortal knows how,
He moves as though cords had entwined him;
Mr. *Metcalf* ran off upon meeting a cow
With pale Mr. *Turnbull* behind him.
Mr. *Barker's* as mute as a fish in the sea,
Mr. *Miles* never moves on a journey,
Mr. *Gotobed* sits up till half after three,
Mr. *Makepeace* was bred an attorney.
Mr. *Gardener* can't tell a flow'r from a root,
Mr. *Wild* with timidity draws back,
Mr. *Ryder* performs all his journeys on foot,
Mr. *Foote* all his journey's on horseback.

Mr. *Penny*, whose father was rolling in wealth
Kicked down all the fortune his dad won;
Large Mr. Le *Fever's* the picture of health,
Mr. *Goodenough* is but a bad one.
Mr. *Crookshank* stepped into three thousand a year,
By showing his leg to an heiress.
Now I hope you'll acknowledge I've made it quite clear
Surnames ever go by contraries.

Monthly Magazine.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 24, 1823.

MARYLAND AGRICULTURAL SOCIETY,

Last Monthly Session of the Trustees.

The trustees of this institution assembled on Wednesday the 15th inst. at HAYFIELDS, the residence of Col. N. M. Bosley. The weather was very fine and after talking over the affairs of the Society, they rambled over the farm, which is divided into fields of Indian corn, small grain, just seeded on summer fallow, artificial meadows, and pasture.

One of the trustees has been good enough to hand us the following rough sketch of their observations—made, we have no doubt impartially, and somewhat after the manner of the examining committees appointed by the agricultural societies in the Eastern States, to make excursions of review over the farms of their members.

"THE INDIAN CORN, promises a fine crop for the appearance of the land which, notwithstanding the indefatigable pains of the owner, is still very stony—we were sorry to see that Col. B. had sustained a heavy loss by the entire destruction of his *corn fodder*—both tops and blades by *frost*.—This is a blow which that enemy occasionally inflicts by *stolen marches*, on the most wary commander. In this case fine weather like a flag of truce, seemed the harbinger of peace, but General Frost stole on Col. Bosley as a thief, *in the night*, and scathed every thing in his route like a desolating fire.—☞ There is no provender for any stock superior to the tops and blades of Indian corn when well cured—an old Farmer present, whose word is authority, observed that for *milch cows*, nothing is preferable to *corn tops*.

"GRAIN ON FALLOW—This consists of Rye, which Col. B. prefers to Wheat for a general crop, and as a protector of young grass—against Oats he sets his face, as the greatest of exhausters, drawing the land like blister plasters, except that they draw out the good humours of the soil and leave the bad behind.—We were gratified and instructed by the complete farmer-like manner in which this important operation had been performed.—The land had been well broken at a proper season, and put in the best condition to receive the grain and grass seeds. The owner had well done his part—may a beneficent Providence consummate his labors with a plenteous harvest.

"GRASSES, CLOVER and TIMOTHY.—These valuable grasses, especially the latter, are obviously the great staples of Hayfields.—To this, he has for some years given his chief attention, and the result is a gratifying evidence of what may be done in a few years, with the roughest land, by the energies of an individual, under the guidance of *good judgment*. Hills high and steep, declivities the most precipitous, and ravines the most forbidding, have been subjected and overrun by his dread-nought ploughs, until, on spots which lately presented the aspect of poverty and barrenness, heavy swarths of timothy now fall before every sweep of the scythe—as a *grass farm*, for its size and original condition, perhaps none in Maryland equals Col. Bosley's, and to his credit be it said, it is the work of his own hands, or rather of his own head—we saw on his books accounts of sales of timothy in one year, amounting to upwards of $6,500, but that article then sold as high as $30 per ton—LIMESTONE, quarried and burned on the land, appears to have been the magic wand by which this enterprising cultivator has changed the face of his estate, and caused the roughest hills to rival the smoothest vallies in verdure. The course of his culture is generally Indian corn, with lime, at the rate of 100 bushels to the acre to be fallowed the *next fall* for rye and timothy, which are sowed about the 10th of September, to be finished before the equinox. The effect of the lime is prodigious as is obvious from the aftermath of clover and timothy at this time.

"DOMESTIC ANIMALS—Totally neglected, except for his own table, the best eaten, and the worst left for breeders. The tail ends of all breeds without the good points of any—the Colonel seems to have been laying the foundation of all good farming, clearing off stone, and putting the land in good heart, with the maxim in his mind's eye, "one thing at a time." He intends now to turn his attention to his stables, his cow yard, his sheep fold and his piggery, and experience will soon teach him that it costs *less* to keep *good* animals beautiful in all their points and profitable in all their qualities, than to keep bad ones, unseemly to the eye, and unthrifty in constitution—in short, any thing but what they should be.——He means to commence the improvement of his stock, by some purchases from General Ridgely, of one or two beautiful Bergami heifers, &c. Choice cattle and hogs, would appear to be the spontaneous growth of a fine grass farm, and an *overflowing dairy*, its most interesting appendage, especially where watered by lime stone springs cool and copious—when the Colonel has provided a better race of milkers, he will, we predict, no longer monopolise the honors of Hayfields. The dairy will yield its trophies to other and fairer hands, judging from the bounteous repast which awaited us on returning from our excursion; but which, on account of its great variety and exceeding elegance, we resolved it would not be good policy to praise in public while each gave the best practical "proof" of his admiration."

Such is the report we received; of its impartiality there can be no question. The trustees adjourned in the evening to hold their next monthly session at Bloomsbury, the residence of H. V. Somerville, Esq.

CANTON RACES—FIRST DAY.

The first purse of $250 was taken yesterday by Gen. Winn's mare *Vanity*—she ran against Mr. Howard's filly, *Miranda*. Vanity took the lead and kept it throughout the heat. This was the first trial of Miranda, and when called for the second heat she was withdrawn.

SECOND DAY.—Col. Johnson's horse Washington, and Gen. Winn's horse Childers, contended for the purse of $500—both heats were won with great ease by Washington.

☞ Baltimore Prices same as last week.

PUBLISHED BY J. S. SKINNER.

AGRICULTURE.

EXTRACTS

FROM MORE MODERN WRITERS ON THE USE OF SALT IN AGRICULTURE.—No. I.

"I am well assured from a Scotch gentleman, that they have long used salt in that part of Great Britain, always sowing ten or twelve bushels by hand of their coarse salt on an acre of young green wheat, some time in November, December, January, or February, it being, from the several accounts which I have had of it, very effectual in the *killing of tender weeds* amongst corn, yet at the same time *cherishing the corn;* and though it does not add altogether to the bulk or height of the straw, yet it does much to the goodness and plumpness of the grain. And whoever has been curious in their remarks abroad, will find that it is the usual practice of the Milanese to sow salt on their pastures, as I have been informed by one who has sold great quantities for that purpose; as also by a merchant of Liverpool, who is well acquainted with that trade, who affirms that the finest crops they have of hemp and flax amongst the Dantzickers and others, who raise those commodities in those countries, are from lands on which salt is strewed."—*The Practical Husbandman*, page 48, vol. i. London, 1733.

"Salt certainly sweetens the grass much; and it may on all such occasions be mixed with a proper quantity of dung, which is more sulphureous than salt, and will make grass shoot away much faster than any other manure. Lime in its own nature makes grass *sour*, but when mixed with salt, that acidity will be taken away."—*Practical Husbandman*, vol. i. page 57.

"As to the proportion of salt to be used on land, it ought to be according to the nature of it; cold, wet, clayey land requiring more, and loose soft land, though it be poor, requiring less. Again, the proportion of salt ought to be either more or less, according to the crops of grass or grain you would improve. For cold, wet, and spewy land, ten loads of dung, six of earth, and eight bushels of salt, per acre.

"For lean, hungry, sandy land, fourteen loads of pond-earth, six loads of dung, and six bushels of salt per acre, when employed for corn and grazing.

For meadow land, fourteen or fifteen loads of dung, five bushels of salt, and four of pond-earth, the quantity of each to be altered according to the quality of the ground."—*Practical Husbandman*, London, 1738, page 59.

"Thus have I made out what I proposed, viz: that every acre of land in England which wants to be improved, may be done ten or twelve shillings an acre cheaper by salt than any other way.

Suppose then, that out of the forty millions of acres of land which are calculated to be in England and Wales, there is but one-eighth part, which is five millions, to be improved every year: and that one-half of those five millions may be manured by some other manure, there yet remains two millions and a half to be done by salt still; which, reckoning the savings at ten shillings per acre only, (the expenses being about the same) comes to one million two hundred and fifty thousand pounds; which, if the old proverb be true, that so much saved is so much earned, then that sum is a real addition to the landed interest of Britain; and this calculation is not at all disagreeable to what is affirmed by some Cornish and Devonshire men, when they say that the money laid out in salt sea-sand, for the improvement of lands in those two counties, comes to thirty-two thousand pounds per annum."—*Practical Husbandman*, vol. i. page 63.

"On watering meadows with solution of salt, we are directed to make a large pit about twenty or thirty feet square, and five or six feet deep, more or less, as there will be occasion, in the method tan or salt pits are made, and put therein ten or twelve bushels of salt, and as much of lime, soot, or any other ingredient of that kind, and, having a pump near at hand, or some conduit or spring of water, fill the pit up by degrees, at first to three or four feet high, letting the ingredients dissolve in the water, by being there twenty-four hours at least, stirring them sometimes about, and after that, by dipping in of the finger it will be found whether the water is salt enough (as near as you can to the strength of sea-water): if it is not sufficient, then may be added a reasonable quantity more of the above mentioned materials; but if it be too salt, then more water may be poured in till it is just right and fit for use; and being possessed of a moving pump or a skip, pump the water into a hogshead, with a leather pipe, and a watering rose at the end of it, just as is practised in watering the streets in London, and so (having the hogshead placed on a roil) may both meadows and corn land be watered to a good advantage."—*Practical Husbandman*, vol. i. page 74.

"Salt provokes the appetite, strengthens the stomach, promotes the digestion and concoction of the aliments, resists putrefaction, prevents unnatural concretions of the humours, and is most friendly and agreeable to the human body, entering its composition as a necessary ingredient No wonder, therefore, that the Laplanders, amongst whom the use of salt is unknown seem to discover the want of it by the exility of their bodies, and the weakness of their constitutions; being much less robust and strong than other northern nations who enjoy this excellent gift of God. Moreover, its uses extend to many other animals besides the human race: black cattle and sheep take a pleasure in licking it, and by it are preserved from many diseases; they also thrive to admiration, and quickly grow fat in marshy grounds that are frequently overflowed by the sea. And if we descend to the vegetable tribe, we shall find that salt contributes greatly to fructify the earth; and when properly used as a manure, affords ample nourishment to corn and other vegetables; and renders kingdoms rich and fertile where it happens to abound in the soil."—Dr. Brownrigg's *Art of Salt*, 8vo. London, 1748 page 157.

"To shew an acquaintance of mine the effects and advantages of salt properly applied to vegetables, I made the following experiment, in an extreme dry summer, upon a bare piece of pasture land, out of which the cattle were all taken for want of grass; I marked four places with stakes, each of which I watered nine nights successively, in the following manner:—the first with spring water alone, to the quantity of a gallon; the second with the same quantity of water, adding an ounce of common salt; the third and fourth with the same quantity, mixing the water in the third place with two ounces of salt; and that in the fourth with three ounces, which produced the following different effects.

"The grass in the second place grew more and of a darker green than that in the first; in the third it only grew by spets, for part of it was killed where the greatest quantity of water fell, and the fourth was quite brown for a greater compass than the third; by which it appeared that an ounce of salt in a gallon of water had a better effect than the water had alone; and that three ounces of salt, mixed with a gallon of water, was more than the grass could immediately receive; but the fourth place in the ensuing spring was the most fertile of them all."—*Treatise of Fruit Trees*, by Thos. Hitt, 8vo. Third edition, London, 1768, page 17.

"Soils which are subject to the grub, and must be fertilized by common dung, which is a proper nest for the mother beetle to deposit its eggs, must be well impregnated with the brine of dissolved salt, after the dung is first cut up: two large hogsheads of salt will make brine enough for a dung pan of fifty feet square. This cure for the grub is a late discovery, for which I am obliged to a judicious planter, and which I have tried with success so far as the experiment is made. But though it proves effectual to destroy that pernicious insect in plantations, I much doubt and believe it will not be sufficient to save rattoons without a new application of salt pounded to a powder; because the first brine must be washed away by the time when rattoons spring up. I therefore advise the planter who would save his rattoons from grub, to cut off the heads of the stools by sharp hoes, three inches below the surface of the soil, and then strew a handful of salt round each stool, and cover it up to a level with fine mould taken from the edges."—*From an Essay on Plantership by Samuel Martin, Esq. of Antigua.*

"Having tried salt upon a small scale on a sandy soil, I can assert sixteen bushels to be a proper quantity for one acre. It gradually advanced in its effects to sixteen, and as gradually diminished to forty bushels when vegetation was destroyed. Twice only have I had an opportunity of buying a few tons of foul salt, and used it both times on a barley tilth, sowing the salt immediately after the barley. The event was perfectly satisfactory. The verdure of the spring exceeded any thing of the kind I ever saw; and the ripened appearance was whiter by many shades than I ever beheld. N. B. Salt is noxious both to weeds and vermin."—R. Legrand, Esq. *on Manures, in the Annals of Agriculture*, vol. v. page 149.

"Mr. Legrand's Observations on Manure are so truly valuable, that I wish anxiously for their continuance." *Arthur Young.*

(To be continued.)

NATURAL HISTORY, No. 2.

[*Continued from page* 61.]

In Number 8 of this volume, we commenced laying before our readers, some extracts under the above headnig—taken from a new and able work, entitled "The Philosophy of Zoology" by John Fleming, D. D: Minister of Flisk, Fifeshire, Scotland. It was our intention to continue them from time to time, as we might find room—being persuaded that while they would serve the purpose of entertaining variety to all our patrons, they might open to the view of our young readers, especially farmers' sons and daughters, some of the beauties, which abound in the study of Natural History.

Some long articles with which the paper was filled at that time, compelled us to break off—and the subject has been overlooked until now—it would be better if we could take it up anew There is, however, no alternative, but to refer the reader back to pages 60 and 61, where the author treats of THE DURATION OF ANIMAL LIFE—the DISTRIBUTION OF ANIMALS, and the influence of TEMPERATURE.—But perhaps the connexion between what has already been, and that which will now be extracted, will be sufficiently perceived by the repetition of the last paragraph, viz:

The variations of the seasons, which bring along with them corresponding changes of heat and cold, exercise a powerful influence on the distribution of animals in reference to temperature. Some species appear to possess a considerable range of temperature, within which life can be easily preserved and all its functions regularly performed. We do not mean to intimate, that there is any animal which can live in our climate, for example, and remain uninfluenced by a difference of temperature of upwards of twenty degrees between summer and winter. The constitutional arrangement suited to the one season, would be prejudicial during the continuance of the other. But there are many animals which live in the same district both in summer and winter, and even in districts differing considerably in their mean annual temperature. What, then, are the means employed by these species to preserve life in the midst of such vicissitudes? The power of producing heat or cold, is a property obviously possessed by the warm blooded animals, and probably in an inferior degree by those which are termed cold-blooded. But in all the efforts made by the system to secrete extraordinary degrees of either heat or cold, there is so great a portion of vital energy expended, that exhaustion and death follow its long continuance. In all cases where the influence of the seasons are to be resisted by efforts of this kind, it would be requisite to continue them uninterrupted for many months. These efforts, however, are diminished in extent and duration by a variety of the most wonderful arrangements, exhibiting the infinite resources of that Wisdom which planned the constitution and continuance of the animal kingdom. To the chief of these compensating or counteracting circumstances we shall now briefly advert.

1. *Changes take place in the quantity of Clothing.*—The same circumstances which enable the negro to go about in a state approaching to nakedness, and impel the inhabitants of the arctic regions to cover themselves with woollen cloth or skins, operate in regulating the clothing of quadrupeds and birds. In the warmer regions, it is requisite to suffer the temperature of the body to be diminished, while, in the colder regions, the very opposite object is aimed at. In the former case, the hair or feathers are thinly spread over the body, while, in the latter, they form a close and continuous covering. In the dogs of Guinea, and in the African and Indian sheep, the fur is so very thin that they may almost be denominated naked. In the Siberian dog and Iceland sheep, on the other hand, the body is protected by a thicker and longer covering.

The clothing of animals, living in cold countries, is not only different from that of the animals of warm regions in its quantity, but in its arrangement. If we examine the covering of swine of warm countries, we find it consisting of bristles or hair of the same form and texture; while the same animals which live in colder districts, possess not only common bristles or strong hair, but a fine frizzled wool next the skin, over which the long hairs project. Between the swine of the south of England, and the Scottish Highlands, such differences may be observed. Similar appearances present themselves among the sheep of warm and cold countries. The fleece of those of England consists entirely of wool; while the sheep of Zetland and Iceland possess a fleece, containing, besides the wool, a number of long hairs, which give to it, when on the back of the animal, the appearance of being very coarse. The living races of Rhinoceros and Elephant, inhabitants of the warm regions, have scarcely any hair upon their bodies; while those which formerly lived in the northern plains of Europe, the entire carcases of which have been preserved in the ice in Siberia, were covered with fur similar to the Icelandic Sheep, consisting of a thick covering of short frizzed wool, protected by long coarse hairs. These species, now extinct, possessed clothing suiting them for the climate where they lived, and where they became at last enveloped in ice. Had they been transported by any accident from a warmer region, they would have exhibited in the thinness of their covering, enequivocal marks of the climate in which they were reared.

By means of this arrangement, in reference to the quantity of clothing, individuals of the same species can maintain life, comfortably, in climates which differ considerably in their average annual temperature. By the same arrangements, the individuals residing in a particular district, are able to provide against the varying temperature of the seasons. The covering is diminished during summer and increased in winter, as may be witnessed in many of our domestic quadrupeds.

Previous to winter, the hair is increased in quantity and length. This increase bears a constant ratio to the temperature; so that when the temperature decreases with the elevation, we find the cattle and horses, living on farms near the level of the sea, covered with a shorter and thinner fur than those which inhabit districts of a higher level. Cattle and horses, housed during the winter, have shorter and thinner hair than those which live constantly in the open air. The hair is likewise shorter and thinner in a mild, than during a severe winter.

This winter covering, if continued during the summer, would prove inconveniently warm. It is, therefore, thrown off by degrees as the summer advances; so that the animals which were shaggy during the cold months become sleek in the hot season.

This process of *casting the hair* takes place at different seasons, according to the constitution of the animal with respect to heat. The mole has in general, finished this operation before the end of May. The fleece of the sheep, when suffered to fall, is seldom cast before the end of June. In the northern islands of Scotland, where the *shears* are never used, the inhabitants watch the time when the fleece is ready to fall, and pull it off with their fingers. The long hairs, which likewise form a part of the covering, remain for several weeks, as they are not ripe for casting at the same time with the fine wool. This operation of pulling off the wool, provincially called *rooing*, is represented by some writers, more humane than well-informed, as a painful process to the animal. That it is not even disagreeable, is evident from the quiet manner in which the sheep lie during the pulling, and from the ease with which the fleece separates from the skin.

We are in general inattentive with respect to the annual changes in the clothing of our domestic animals; but when in search of those beasts which yield us our most valuable *furs*, we are compelled to watch these operations of the seasons. During the summer months the fur is thin and short, and is scarcely ever an object of pursuit; while during the winter, it possesses in perfection all its valuable qualities. When the beginning of winter is remarkable for its mildness, the fur is longer in *ripening*, as the animal stands in no need of the additional quantity for a covering; but as soon as the rigors of the season commence, the fleece speedily increases in the quantity and length of hair. This increase is sometimes very rapid in the hare and the rabbit, the skins of which are seldom ripe in the fur until there is a fall of snow, or a few days of frosty weather; the growth of hair in such instances being dependent on the temperature of the atmosphere.

The *moulting* of birds is another preparation for winter, which is analogous to the casting of the hair in quadrupeds. During summer, the feathers of birds are exposed to many accidents. Not a few spontaneously fall; some of them are torn off during their amorous quarrels; others are broken or damaged; while in many species they are pulled from their bodies to line their nests. Hence their summer dress become thin and suitable. Previous to winter, however, and immediately after the process of incubation and rearing of the young is finished, the old feathers are pushed off in succession by the new ones, and in this manner the greater part of the plumage of the bird is renewed. During this process of moulting, the bird seems much enfeebled, and, if previously in a weak state, is in danger of dying during the process. In consequence of this renewal of the feathers, the winter covering is rendered perfect, and the birds prepared for withstanding all the rigors of the season. In those birds whose plumage changes color with the seasons, the moulting takes place in subserviency to the purposes of these variations, as we shall shortly have occasion to notice.

By this addition to the non-conducting appendices of the skin, quadrupeds and birds are enabled to preserve the heat generated in their bodies, from being readily transmitted to the surrounding air, and carried off by its motions and diminished temperature. But along with a change of quantity, there is frequently also a change of color.

(To be continued.)

ADVICE TO YOUNG FARMERS.

The Horse—how to know his age.

The Editor believes, from much observation, that the following directions are the plainest and best he has ever met with on this subject.

The AGE OF A HORSE, it is sufficienty well known, is only determinable with precision by his teeth; and that rule fails after a certain period, and is sometimes equivocal and uncertain, even within that period. A horse has forty teeth; namely, twenty-four double teeth or grinders, four tushes, or single teeth, and twelve front teeth, or gatherers. Mares have no tushes in general. The mark, which discovers the age, is to be found in the front teeth, next the tushes. In a few weeks, with some, the foal's twelve fore teeth begin to shoot; these are short, round, white, and easily distinguishable from the adult or horse's teeth, with which they come afterwards to be mixed. At some period, between two and three years old, the colt changes his teeth; that is to say, he sheds the four middle fore teeth, two above and two below, which are sometime after replaced with horse's teeth. After three years old, two others are changed, one on each side the former; he has then eight colt's and four horse's teeth. After four years old, he cuts four new teeth, one on each side those last replaced, and has at that age, eight horse's and four foal's teeth. These last new teeth are slow growers, compared with the preceding; they are the corner teeth, next the tushes, are called pincers, and are those which bear the mark: this mark consists in the tooth being hollow, and in the cavity bearing a black spot, resembling the eye of a bean. The tushes may then be felt. At four years and a half old, these mark teeth are just visible above the gum, and the cavity is very conspicuous. At five years old, the horse has shed his remaining four colt's teeth, and his tushes appear. At six, his tushes are up, and appear white, small, and sharp, near about which is observable a small circle of young growing flesh; the horse's mouth is now complete, and the black mark has arrived at, or very near the upper extremity of the corner teeth. At seven, the two middle teeth fill up. Between the seventh and eighth year, all the teeth are filled up, the black mark hath vanished, and the horse is then said to be aged, and his mouth full.

From that time forward, the age of the horse can only be guessed at from certain indications; but these guesses are usually made with considerable accuracy by experienced people. If his teeth shut close, and meet even, are tolerably white, not over long, and his gums appear plump, you may conclude he is not yet nine years old. At that age, and as he advances, his teeth become yellow and foul, and appear to lengthen, from the shrinking and receding of the gums. The tushes are blunt at nine; but at ten years old, the cavity or channel, on the inside in the upper tushes, until that period to be felt by the finger, are entirely filled up. At eleven, the teeth will be very long, black, and foul, but will generally meet even; at twelve, his upper-jaw teeth will overhang the nether; at thirteen and upwards, his tushes will be either worn to the stumps, or long, black, and foul, like those of an old boar. Beside those exhibited by the mouth, nature ever furnishes variety of signals, denoting the approach of old age and decay, throughout the bodies of all animals. After a horse has past his prime, a hollowness of his temples will be perceived; his muscles will be continually losing something of their plumpness; and his hair, that gloss and burnish, which is the characteristic of youth and prime, will look dead, faded, or entirely lose its colour in various parts. In proportion to the excess of these appearances, will be the horse's age.

The following are among the devices practised by a set of unfeeling rascals, who have no other rule of conduct than their supposed interest, to counterfeit the marks of age in horses. At four years old they will frequently knock out the remaining colt's teeth, in order to make the horse appear five; but you will be convinced of the fraud, by the non-appearance of the tushes; and if it be a mare, by the shortness and smallness of the corner teeth and indeed of the teeth in general. To give an old horse the mark, is termed, to bishop him; of the derivation of this term I have no knowledge. They burn a hole in each of the corner teeth, and make the shell fine and thin, with some iron instrument, scraping all the teeth to make them white; sometimes they even file them all down short and even. To this they add another operation; they pierce the skin over the hollows of the eye, and blow it up with a quill: but such manœuvres can deceive only the inexperienced, and in case of dispute would be detected in an instant.

Of the colours of horses, nothing, in my opinion, can be said more to the purpose than to repeat an adage of old Bracken,—"A good horse is never of a bad colour." Modern light and experience have been happily employed in detecting and exploding the theoretic whimseys of antiquity upon almost all subjects; among the rest, upon that of attributing this or that, good or evil quality, or temperament, to the colour of a horse. All that I am warranted in saying, from my own observation, is, that I have seen more bad horses of all kinds, among the light bays, with light-coloured legs and muzzle, than amongst any other colours; and the most good saddle and coach horses, among the common bays, with black legs and manes, and the chocolate browns. This, in all probability, has been accidental.

CULTURE OF THE VINE.

York, (Penn.) October 24.

This has become an object of great promise in York county. Experiments have already shown that the vine will not only flourish in the poorer soils of this county, but that excellent wine can be made, and that raising vine yards will become as profitable as any other agricultural pursuit.

A portion of the land in York county is thin and poor, commonly called barrens; it has been proved that the vine succeeds well on this land; and 20 acres of it which can now be bought for from 6 to 10 dollars per acre, when planted with vines, and those at maturity, will be more productive to the owner then 200 acres of the best land in the county. No capital is required in rearing a vineyard; the proceeding requires only attention and perseverence.

Mr. Thomas Eichelberger, an enterprising citizen of this place, was the first who seriously commenced the cultivation of the vine with a view to profit. Having a ridge of slate land which runs through his farm—he conceived the idea of turning it into a vine yard; and he engaged a German emigrant, who had been a vine dresser, and wine maker, in his native country. To this man he gave a permanent interest in 4 acres of land, and its produce, which was set apart for planting with vines; a small house was also put up for the working partner, near the premises. Mr. E. advanced the means of procuring the cuttings for planting, and other expenses, and also for the subsistence of the laboring partner, till the vine yard should become productive, when he was to be repaid.

Under this arrangement, in 1818, the 4 acres were planted in rows, with wide intervals, and those intervals were filled up in the following years, with the suckers, or sprouts, which grew from the original plants; these therefore are 1 or 2 years later than the first plantings. It required one hand to manage all this and keep the grass down during the summer; in the winter, the vine dresser was at liberty to work days' work where he could get employment. It will be observed that although the whole 4 acres were planted over in the beginning, yet only one-third of the vines were set. These had the start of the others, and began to bear in the 3d. year. In the vintage of 1821, Mr. Eichelberger made two or three barrels of wine, which was of a good quality.

In the vintage of 1822, he made eleven barrels of wine, and sold a considerable quantity of grapes. The oldest vines having now acquired strength, and the second plantings also beginning to bear, though yet in small quantities, he was able to make thirty-one barrels in 1823, besides selling grapes for perhaps $200. During the time that the grapes were ripening, the vine yard was crowded with visiters, all of whom bought more or less. This considerably diminished the grapes which were designed for the press. After 3 years Mr. E. had no more advances to make, as the vine yard produced enough to support itself. The profits arose from the sale of grapes; of the wine made the preceding year, and from the sale of cuttings at $30 per 1000.

The wine of 1822 was sold in 1823, to visiters, at the rate of $3 per gallon. It is difficult to compute what the profits may amount to, in seven years hence; as the vines become more robust, they will produce more fruit, and this increase will probably continue for ten or twenty years. The oldest of the vines are yet in their infancy; and the vine dressers from France and Germany, who have seen Mr. Eichelberger's vine yard, say, that it is more flourishing and further advanced for its age, than any thing of the kind that they have seen in Europe.

It is no extravagant conjecture, that Mr. Eichelberger's four acres will, at the end of two years from this time, produce grapes to make 100 barrels of wine. This is what the vine dressers confidently assert. Mr. E. has, since the commencement of his first vine yard, planted two other portions of ground, of three acres each, contiguous to the other. For each of these he has a German vine dresser, to whom he has given an interest, as in the first case, but pays nothing else.

He proposes to extend this vine yard to 20 acres, though under different tenants—four acres being as much as one man can well attend to.

Mr. E. has also made two plantations of vines on a farm about ten miles from York, in the very heart of the poorest land in the barrens.—Those flourish and promise as well as his first vine yard, though they are but two and three years old. The oldest bore grapes this season.

Judge Barnitz, and Mr. Nes, have each planted vine yards in the vicinity of York. They are but three years old. They made about two barrels of wine each. Last year they made each a small quantity, which, after fermentation, became very fine, and of an excellent taste and flavour. Competent judges are satisfied that these wines will be equal to the wines of France and Germany. Mr. Eichelberger has the Madeira, Lisbon and Burgundy grape.

A German emigrant, fifteen miles from York, has made a vine yard on lands of his own. He has two acres, and it is four years since he planted it. This year he made ten barrels of wine.

Mr. Crull has made a vine yard on the side of a steep river hill, 12 miles north of York. The hill has been cut into steps, and planted in the Alpine style. His also flourishes, and bore grapes this season.

Besides these, there are several more in the neighborhood; and preparations are making to plant at least 15 or 20 more in the ensuing year.

It is a matter of encouragement, that there does not appear to be much danger of a failure of crops, as Mr. Eichelberger has not perceived that the cold spring weather has injured his vines. Last spring was unfavourable for fruit, so much so, that the peach trees, apple trees, and other fruit, were much injured; yet his vines did not suffer, except a particular kind of white grape appeared to be a little injured.

The wine which has been made, appears to contain sufficient alcohol to preserve it from acetous fermentation. Mr. E. has some two years old, which has been racked several times, and is perfectly sound, although it has had nothing added to it, but has been allowed to depend altogether upon its own intrinsic strength. Mr. Nes, and Judge Barnitz, also have preserved their wine without any additional aid.

It should not be understood that the spirit which has got up among us, about raising vine yards, is of a speculating character, and therefore in danger of blowing out in a few years. It is bottomed on something solid and permanent, as much so as any other branch of tillage or agriculture. For those who make experiments, put no capital to hazard; they feel their way as they go; and enough is already proved to convince every one that the pursuit will be profitable.—There is land of a suitable soil enough in York county to raise wine for the consumption of all the United States; and twenty years from this day, more wine will be made in Pennsylvania than is now imported into it. When once a vine yard has come to maturity, the owner will be able to sell his wine at 50 cents per gallon, and have abundance of profit.

Most of the sites where vines have been planted, are on the sides of hills, with a gradual slope, and southern aspect; though practical men say that they succeed equally well on the north side.

Observation and experience will teach in due time what kind of grapes will suit best to the soil and climate, and also how to manage the grapes, and the juice, to obtain the best wine.—Mr. Eichelberger has sufficiently proved that both the white and red wine will succeed.

Many interesting considerations are suggested by the successful cultivation of the vine in this country. In a moral, statistical, and national view it is important, and will be hailed as one of the greatest acquisitions that has been made to our domestic economy.

NOTE.—Since writing the above, I have been informed, that Mr. Overdoff, who has a very flourishing vine yard, raised his plants from the seed, which were sown in a bed in the garden, and after one year, were transplanted. Having roots, they are not so liable to fail, as the cuttings, which are joints of a vine, one end of which is stuck in the ground.—*Recorder.*

TO THE EDITOR OF THE AMERICAN FARMER.

ICE HOUSES—WITH ICE CLOSETS ATTACHED.

Highlands, 2d *October*, 1820.

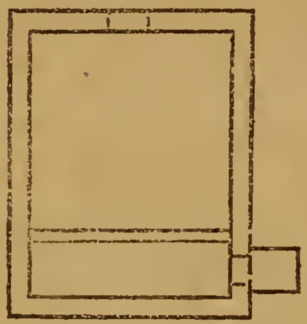
DEAR SIR,

I herewith hand you a sketch of my ice closet attached to my ice house, which I recently described to you cursorily, and of which you requested a more minute description. Having tested its value, I can with truth declare it to be a most valuable appendage. The citizen and farmer may both enjoy its comforts—the latter more particularly, will soon know its value, where he is deprived of the benefits of a good spring. The greatest importance, however, attached to its use, I conceive to be the preservation of fresh meats, which I have kept for three weeks, as sound and wholesome, as the day it was placed in the closet, being entirely free from the musty and clammy flavour which it is apt to partake of, when confined in the customary way on the top of the ice. The only danger I apprehended, was the fear of losing my ice sooner in the season, from the closet drawing its quantum of cold atmosphere from the ice; I am happy to find, however, that my house still contains a body of ice, although it was little more than half filled, and (from my absence,) very imperfectly rammed.—The size of my house is twelve feet square, and in depth to the floor, there being a space of one foot underneath, sloped to the centre where there is a well of two feet, to receive any water which may pass from the ice. The closet is four feet in width, which affords sufficient room for a private family—to enlarge it, would be drawing too largely from the ice, which might occasion it to melt more rapidly. If it should be required of larger dimensions, (particularly for butchers to whom it will be invaluable,) I would advise that the house be enlarged in proportion. The pit is dug about three feet wider at top than bottom, the house being built perpendicular, (of logs or plank, mine is of the former,) will leave a cavity eighteen inches wide at top, round the house, in which straw is to be closely crammed; this, with a layer of straw at bottom and straw mats laid over the top of the ice, will be quite sufficient for its preservation. The partition is made of the same materials the house is built of, observing not to join it too close, leaving the slightest opening, so as to admit the escape of cold atmosphere into the closet, the top of which to be tightly closed up. The communication to the closet must be by a descent from one end of it to a door, to be cut immediately under the plate of the house and from thence by a small flight of steps to the bottom of the closet, which is to be on a line with the bottom of the ice room, the top of the steps on the side to be secured by a sloping door; the lower door of the closet to be made only large enough to admit one person at a time, both tight, and to be opened as seldom as possible. The roof ought to project wide enough over the pit to secure it from the weather; where the ground is tenacious, I conceive it unnecessary to wall up the pit, but when this is not the case it will be most prudent to do so—I have been, I think, unnecessarily particular in the description, and if you agree with me, you can make use of only such parts of it as may be thought requisite.

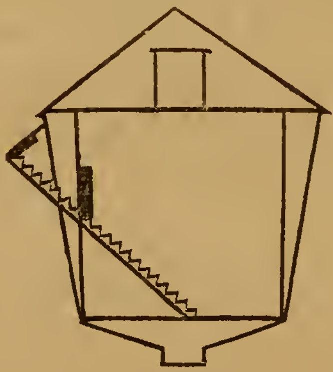
I have added also a ground and elevated view, of the interior of the house, as it may serve to elucidate some parts of this hasty sketch.

I am your's
Very respectfully,
J. S. WILLIAMS.

Ground View.



Elevated View.



TO THE EDITOR OF THE AMERICAN FARMER.

WATER CART.

DEAR SIR,

Not only the book authority, but the experience of hundreds of our own agriculturists, have established the fact, *that salt, common sea salt, is an excellent manure.* The chief virtue in the sea ooze, or sea grass, by which the produce of many farms on our salt water bays and rivers has been very much increased, is now generally believed to be the salt carried out with them. It has long been observed, that where a seine has been usually hung up to dry, the grass always grows with a luxuriance, that cannot be fairly ascribed to the mere drops of water, which fall off the seine; but is much more, probably, owing to the salt contained in those drops. A dressing of salt would undoubtedly produce the most effect on fresh land—that is, on land not immediately adjacent to a salt shore, or saline atmosphere. It is said that from 10 to 16 bushels to the acre, according to situation, is a good dressing. It is also said that as high up the Chesapeake Bay as South River, or Poplar Island, there is a half bushel of Light blown salt contained in every 120 gallons of water. But every farmer on the salt water, by boiling down 15 or 30 gallons, an eighth, or a fourth of the first quantity, can easily discover the proportion of salt contained in the water he can command.

In your 22d No. vol. 5th, you have published a useful paper from Mr. Rowand on this subject. Having long been of opinion that our salt waters contain the cheapest manure, that can be applied to lands, on or near their margins, I had formed the plan of a cart for taking it out. Mr. Rowand does not state; but I presume the rolling hogshead must be loaded by hand with a bucket, and Mr. Smith's cart is loaded by a pump. Under the impression that a cheap cart can be made to load with vastly more facility, and to distribute its contents at least equally well with either of the others, I will endeavour to explain the construction. The width and size may be varied to suit any one. For my purpose a pair of wheels five feet diameter with strong felloes, and no tire. (A pair of well made wheels constructed strong, and purposely to be used without tire, will run for six or seven years; the best tire constantly used in salt water, will soon rust out; and two pair of wheels without tire, will cost less than one pair shod.) An axle as long as will permit the wheels to pass through a nine feet gateway, say six and a half feet between the hubs. A pair of strong shafts, to be made seven feet longer than is necessary for the horse. These shafts to be placed on top of the axle, in such a manner, that they may be the right width a part for the horse when three and a half feet of the after ends are behind the axle, and to be bolted through the axle in this position. As these shafts will not only have to bear the weight, but the framing to hold the body, the seven after feet of them ought to be stout. The body to be a box, water tight, except an opening of three or four inches on the forward part of the top—and to be six feet by four, and one foot deep in the clear, to be placed lengthwise under the axle—the middle of the box a little forward of the middle of the axle. Four pieces to be framed; two into the underside of each shaft, so wide a part, measuring along the shaft that they will take the box between—say one foot ten aft, and two feet two fore, and of the middle of the axle, in order to make the load bear a little on the back of the horse. Let two pieces be framed into each pair of these short pieces, parallel to the shafts, in such a manner that the box will rest safely on them under the axle, and between the short pieces—and the body and short framing on the sides may be so constructed, that should the joints open, they may be driven close, by wedges, or keys.

You now have a tight cart, that will hold about 120 gallons, placed snugly under the axle, and one foot clear of the ground. If this be not high enough—increase the diameter of the wheels—but one foot clear of the ground will do. Our fields lie generally in corn ridges, four and a half or five feet from ridge to ridge. In the back side of the box, near the bottom, five feet apart, and, of course, six inches from each end, insert two wooden faucets and spigots. Let the holes come straight through the faucets; and with a piece of slip wood weave a little bonnet, which you may lash on the end of each fauset to act like the spout of a watering pot, and distribute the water equally over the land. This is sufficient for me—but if you would be still more particular—have a light box six feet long, six inches deep, and six inches wide, with two little cords; hang this over the spigots, the faucets in this case emitting the water below. Let the requisite number of holes be bored all along the bottom of this box. The water will then issue into this box from the two cocks, and be equally distributed over the whole surface. Make a snug, convenient seat for the driver on top of the shafts. But the loading?—Most farms on the salt water have one or more landings with a good firm bottom, where you can drive into three feet water. In the bottom of the box, or body, bore a two inch auger hole. Over this hole, on the inside, with a block of wood and a piece of leather, fit a valve, or what we call a pump clapper. Put in the horse, mount the boy, and drive right into the creek. As soon as the water is up against the bottom, up goes the valve and in it rushes. If this does not load fast enough; as soon as water sufficient is admitted to keep the machine from floating, drive in till the water rushes over the top, and fills the cask in a moment. The boy has had nothing to do, but to sit still while the cart loads itself. The action of starting out closes the valve in the bottom, and away he goes with a dressing for the 20th or 30th part of an acre. When he gets to the place to commence his discharge, he comes aft, turns his spigots and starts. The emission of water should be gauged to run out only at half rate—that is, the load ought to be made to sprinkle double the surface you wish it to manure, and the spot where the load is exhausted should be marked, because from the starting of the water to the exhaustion of the load, it will flow out slower and slower, or in a constantly decreasing ratio. Therefore the second load should be brought to where the first load gave out. At this spot the sprinkling of the second load should commence, and the same ground wetted with the first load, should be again gone over in reversed order. In this way every inch of grouod will receive the same quantity of water, and of course the same quantity of salt.

There are thousands of fields on the margin of our salt water courses, the centres of which are not more than half a mile from a landing, with a good hard sandy bottom.—In every such field a horse and water cart; and boy just big enough to drive a sober nag with nothing but the pleasant amusement of riding, would take out 30 loads, or manure one whole acre a day. In what other possible mode can you manure an acre so cheaply, and with so little trouble?—and by increasing the size of the cart, and doubling the team, salt might be carried out in this way, one, two or three miles with œconomy. One of your correspondents stated that he freed his wheat from insects and very much improved his crop, by strewing a very small portion of salt per acre on his wheat in the spring season.—Here then is the mode by which you may salt your wheat in the best manner, *ad libitum*.

Every manure yard should certainly be hollow, and have one or more vats—and one of the above carts always in place to take out and top dress any growing crop with their contents.—Would not this be the best construction for a cart to water your streets in the sultry season?—It would drive into Jones' Falls, load itself, and out again.

The body box should be made of thick two inch white pine.—It is light, and if the key wedges did not drive it tight, it would always quickly swell tight.

Your humble servant,

SANDY POINT.

OXEN—THEIR USE IN AGRICULTURE.

We cannot be more fully persuaded of any fact than we are of the great saving that would be accomplished by the more general use of oxen, in place of horses, for agricultural purposes. A calculation made on a proper scale would shew, that by this reform alone there would be an annual saving of millions of dollars to the nation. This is the season of Cattle Shows, and Agricultural Exhibitions, and they have become so numerous that it would be impossible to give their proceedings, in detail, in the Farmer; but in the desire to illustrate what can be done by OXEN with the plough, we shall select the reports of committees on that subject at the Fairs in the eastern states. The common fear and excuse is that they cannot bear the heat of the *South.* This we doubt, provided the oxen are well trained and fed on dry food, but at all events we are *perfectly convinced* that the Tuscany breed of cattle imported by Commodore Bainbridge in the Columbus, and now in possession of Mr. Middleton of South Carolina, will give oxen that will bear the heat of *that state* as well as horses.

Edit. Am. Far.

The committee appointed to award the premiums offered by the Rhode Island Society for Ploughing (John H. Clarke, Esq. Chairman,) made the following report:

That they were happy to perceive an unusual competition, and excitement among the numerous candidates for premiums, arising confessedly from a conviction that good cattle and ploughs of improved structure, constitute the first security for good ploughing, within the least time; and that among the several yokes of oxen entered for ploughing many of them were fine animals equally remarkable for their strength and docility.

The first premium of ten dollars, for ploughing, and two dollars to the driver and ploughman, was awarded by the committee, to Mr. Harding Hudson, of Cranston; who ploughed one eighth of an acre of sward ground, in an excellent manner, in the unprecedented short time of 14 minutes and 5 seconds.

The second premium of eight dollars, with two dollars to the driver and ploughman, was awarded to Mr. Elisha Olney, Jr. of Smithfield, who ploughed an equal quantity of land, well, in 14 minutes and 25 seconds. His cattle were of fine form and broke in the best manner.

The third premium of six dollars, with two dollars to the driver and ploughman, was awarded to Mr. Abner Sprague, of Cranston; his cattle were of superior size, strength and beauty, and ploughed the same quantity of land, well, and very deep in 15 minutes and 6 seconds.

The fourth premium of four dollars, with two dollars to the driver and ploughman, was awarded to Mr. George Colvin, of Warwick, whose cattle, but of middling size, evinced uncommon nerve, and perfect subjection, and ploughed the same quantity of land in 15 minutes and 25 seconds.

Some other teams performed their work in less than 15 minutes, but the committee considered their ploughing as not so well done.

The excellence of the cattle of Jesse Foster, Esq. of Smithfield; of Mr. Martin Smith, of Scituate, and Mr. Halsey Ellis, of Cranston, excited the attention of the committee: they were animals of much beauty and great strength; and although, the committee have awarded to others the premiums, still so nice was the competition, and so nearly balanced were their claims, that your committee felt embarrassed in pronouncing their decision.

The committee feel it a further duty to notice a voluntary ploughing match, which took place immediately after the ploughing for premiums was finished. A pair of oxen of superior strength and quickness, owned by Mr. Richard Fiske, of Cranston, and driven with great skill, by Mr. Joseph Sheldon, ploughed the same quantity of land, in the short space of *eleven* minutes. These cattle were excluded by the committee from entering for a premium, one of them having been a premium ox the last year.

The same cattle of Mr. Olney, to whom is adjudged the second premium, ploughed another piece of land of equal size, in 15 minutes and 45 seconds.

But in the last trial of excellence and speed nothing excited so much admiration, as a beautiful and well broken pair of three years old steers, owned and driven by Mr. Nicholas Waterman, of Johnston. These fine young cattle, ploughed one eighth of an acre of ground, well, in the short space of 15 minutes and 50 seconds. The committee consider Mr. Waterman entitled to great credit, for raising such animals, and for their extraordinary docility.

The committee cannot refrain from expressing their gratification at the very fine exhibition of draft oxen, particularly those owned by Mr. Foster, Mr. Ellis, Mr. Olney, and Mr Colvin; and regret that they had not the power to award a premium to them. They beg leave to recommend, that in future a specifick premium be awarded to draft cattle.

FROM THE NEW HAMPSHIRE PATRIOT.

HILLSBOROUGH CATTLE SHOW.

Report of the Committee on Working Cattle.

The committee appointed to examine the merits of Working Cattle, and to adjudge the awards, have attended to the duties of their office, and beg leave to report.

Agreeably to their instructions, they have taken into consideration not only the ploughing, but the goodness of the cattle, time, &c. What, or how much was intended by the &c. your committee were unable to determine; but they presumed that it embraced, or might embrace the discipline of cattle, and they have brought it into the estimate in making their decision. That cattle, destined for labour, should be well broken to the yoke, and submit to the authority of the teamster, is universally admitted, and generally practised. But it is of great importance that they be learned to exercise the plough without a driver. This is easily effected; and it is a great saving of expense in the cultivation of fields. Most of our ploughing can be done by one yoke of oxen; and with little attention they will perform as much labour on the plough without, as with a driver. Even two yoke may easily be taught to do the same. By using the most active and highest spirited pair for leaders, there will be little or no difficulty attending the practice. To save the expense of a man, or even a boy will be no small additions to the interest of a farmer. It is equally important to reduce the expense of cultivation, as it is to increase the quantity and value of crops.

While we make our observations upon cattle, we would not pass by the teamster with neglect. We cannot forbear to remark on the excessive use of the whip, though there is not so much cause of complaint as there was the last year. Oxen that are well disciplined, will do all they ought to do, and they will do all they can do without severe whipping. That the ox, that most useful animal, that most faithful servant of man, distinguished for his patience and industry, pre-eminent among the herd of the stall, whose tongue was never defiled by an indecent, or profane word, whose breath was never polluted by the fumes of intoxication, and before whom the Egyptians bowed down in devout adoration, that the ox, I say, should be the object of the unmerciful scourge is an outrage upon that law, which has given to man dominion over the beasts of the field.

After trying the oxen presented, on the drag and on the plough, the committees have come to the following decision, and they make the following awards.

To Mark Morse, the committee award the first premium on Working Cattle. Taking into view the age, form, size, strength and activity of his cattle, they came to this result.

To Moses Greene is awarded the second premium. His cattle are five years old, measure 7 feet, 3 inches; they are remarkable for their strength; and they work with a good degree of activity. They are in a high state for beef, though they have done the necessary work on his farm, the past season.

To David Damforth is given the third premimium. His cattle are five years old, of large size, good form and discipline, great activity, and promise to be very useful. These points led to the decision.

The fourth premium is awarded to John Johnston. His cattle are large, fleshy, strong, and performed his work very well.

Other cattle richly deserved premiums; and it was with some difficulty a selection was made. The committee, though past the meridian of life, decided as if they believed that advanced age was derogatory to character, or promising usefulness. Mr. B. Parker, and Mr. Joseph Kingsbury, presented no statements respecting their cattle, agreeably to the regulations prescribed.

The ploughing match demands a few remarks. It was cause of regret that a more suitable piece of ground could not have been selected for the purpose. The land was laid out into plats of about one eigth of an acre each. There was a little difference in their size, a little difference in the quality of the work, a little difference in goodness and breadth of the ploughs, and a little difference in the time of performing the work, The average time was from 10 to 11 minutes, exceeding in shortness of time what has ever been done before in this society.

Fourteen yoke of cattle were entered for premiums, and thirteen entered the list for competition. They all excelled in some points; but as only four premiums were offered, the expectations of some must, of course, be disappointed. The general character of the working cattle was excellent; and though some of them could not draw a premium they could draw as much upon a drag, as the most highly favored oxen.

The progress, which is making in this department of stock is highly pleasing; and encourages the farmer to persevere in his exertions for improvement. It is hoped that all will give a hand to the work, in which they are all equally interested.

Respectfully submitted by your committee.

HUMPHREY MOOR,
in behalf of the committee.

Francestown, Sept. 25, 1823.

* * *

☞ THE MARYLAND GAZETTE, printed at Annapolis, the seat of Government of Maryland, is now the oldest newspaper existing on this continent.—It was established in the year 1745, and has remained in the same family from its commencement to the present day.

It has always been remarkable for its typographical accuracy and neatness of arrangement; qualities essential to the professional character of every printer, as well as to the satisfaction of readers.—We heartily wish we could accomplish for the American Farmer better reputation in these respects.

For old acquaintance sake, and personal respect for a brother Editor, we give place to the following exposition of Mr. Green's views, in regard to some changes contemplated in the plan of the Maryland Gazette.—*Edit. Am. Far.*

To Mr. Monroe much praise must be accorded for that state of harmony, which has for some time past pervaded our country—so wise has been the course of policy that he has pursued, that he has satisfied all parties, and left us nothing to dispute about. So great then has been the change of circumstances which a few years have produced, not only in our own country, but in Europe also, that the Editor deems it no longer necessary to continue his paper as the advocate of any particular political party. *Its columns will henceforth be open to all who may choose to avail themselves of them*, without any other restrictions than requiring decency of language; the avoiding of personalities, and correctness of composition. But it will be the peculiar object of the Editor to render his paper subservient to the best interests of his own state.—He wishes to make it emphatically a *State Paper*. By this expression, he means a paper, whose province it will be to uphold and maintain the honor and dignity of the state—to promote her prosperity by diffusing such information with regard to her resources and her means of internal improvement, as he may be enabled to obtain. As an indication of the future character of his paper, he has given to it the new title of the *State Register*. It will in future become the repository of all state documents, and of such other information as may tend to elucidate the history of the state, or promote its improvement and prosperity.—It will also be the object of the Editor to present his patrons with the earliest intelligence, fereign and domestic; and he will be particularly careful to devote a due portion of his paper to the interests of Agriculture, Manufactures, and Domestic Economy.

With this statement of his objects and his views, the Editor submits his plan to the patronage of the public.—Should it be favored with their support, he will endeavor not to disappoint the expectation that may be excited.

If sufficient encouragement be afforded, the paper will be enlarged to an imperial size, and printed with a new type.

* * *

Purging Powder for Pigs.

Jalap, 1 dram. Should this be found insufficient, 10 or 12 grains of scammony may be added, or 10 grains of calomel; but it is better, perhaps, to try the jalap alone first. It is difficult to drench a pig, but if it can be done, a solution of Epsom salt may be given, with a little castor oil, or an infusion of senna; probably a solution of common salt would do, when there is nothing else, especially if a little oil be given with it.

Dog Mange.

This disorder is very common in dogs, and may generally be cured by rubbing in the following liniment, keeping them on a wholesome diet, chiefly of vegetable food, and giving them now and then a little opening medicine. The mange is known by the dog almost constantly scratching himself, and by the skin appearing moist, and sometimes scabby. The dog should be well scrubbed with soft soap and water, or tobacco water, and well wiped with a dry cloth immediately after. When quite dry, apply the mange liniment, taking care to rub it well on every part.

There is an obstinate kind of mange, in which the skin appears of a bright red color, and sometimes scabby also. Here some internal remedies are required of the alterative kind, such ss Ethiop's mineral, calomel, or even very small doses of sublimate, (from 1-8th to 1-4th of a grain.) Mange is sometimes extremely obstinate, and terminates in dropsy or consumption.

Mange Liniment.

Sublimed sulphur, - -	1 ounce
Train Oil, - - - -	4 ounces
Oil of Turpentine, - -	½ ounce.-mix

* * *

FROM THE NEW-YORK STATESMAN.

CULTIVATION OF THE VINE.

A friend has handed us proposals for publishing, by subscription, a work entitled the *Vineyard*; or, the art of cultivating the vine and of making wine; by *William Lee*, for several years Consul for the United States at Bordeaux. This work will be comprised in one volume, of 300 or 350 octavo pages, and contain the history of the vine from the earliest ages—the natural history, and the varieties most generally cultivated—the climate, soil, and exposure of the best vineyards in Europe—the choice of plants, manner of planting, and of cultivating the vine—diseases of the vine, accidents, and the manner of preventing both, and of renewing the plants—and the whole process of preserving the fruit, and making wine and vinegar. The whole will form a complete system for conducting a vineyard.

Within the last year, we have had an opportunity of tasting the most delicious wines, made in different parts of the United States; and in the course of the present season, we have seen in two gardens, one at Brooklyn, and the other at West-Point, the strongest proofs that in our climate the grape may be cultivated in the greatest profusion, of an excellent quality, and with very little labour and expense. There is a single stock growing at Brooklyn, which at this moment bears $500 worth of grapes, while it has cost the proprietor scarcely as many cents for the cultivation, and at the same time furnished a most delightful arbor during the heat of summer. The vine is from North Carolina, and so far from degenerating, it appears to be improved by being transplanted to a more northern latitude.

* * *

The show of fruit at the agricultural dinner at *Brighton* was unusually fine this season.—Among the rarities, were some superb Lemons presented by the Rev. *Mr. Bigelow*, the products of his Green-house at Medford. The average weight of six of these was more than a pound each. One of them weighed no less than twenty two ounces, and measured fifteen and an half inches in the longer circumference, and thirteen inches round. The flavor of the lemons was perfect; although the rind, it was remarked, was somewhat thicker than in those imported. Other fruits were excellent in the kinds; particularly grapes from the gardens of Messrs. *Pomeroy*, *Perkins*, and *Cook*; several varieties of pears presented by the *Hon. John Welles*; wall-peaches from the garden of *Mr. Bigelow*; and last, not least, a basket of *Bon Cretiens*, the produce of a pear-tree planted in Salem by *Gov. Endicot*, about the year 1640. The last were presented by *E. H. Derby.—Bo 'en.*

MAMMOTH WHITE OAK.

The following were the dimensions of a tree cut down in Hardy county, for the purpose of a shaft, to be used at Union Forge in this county.

The stump measured 4 feet 10 inches across, and 14 feet 6 inches in circumference. When dressed to haul home, 3 feet 4 inches at butt, 3 feet 2 inches at top, and 25 feet long. It was ascertained to weigh 6 tons.

The tree was brought from Devil's Hole, 14 miles from the forge, over a mountain road, on a wagon with six wheels, drawn by twelve horses. The tree was the growth of Mr. Sager's land.

Virginia paper.

* * *

Mr. Peter Boynton, of Shelburn, Vermont, has raised the past season, upon three acres and one tenth of an acre of land, *two hundred and fifteen bushels of winter wheat.* A considerable portion of this crop has been sold for seed at $1 50 cts per bushel, averaging from sixty-one and a half to sixty-four pounds per bushel, which is pretty good evidence of its quality.

* * *

Rot in Sheep.—Dried Juniper Berries are the best antidote against this destructive epidemic. As soon as the slightest symptoms of it appear in a flock, a handful of these berries should be given for every two sheep per day, and to be continued until all apprehension is removed.

* * *

Bean Product.—Three beans planted in the garden of Mr. Barnum, of Stockbridge, the past season, produced, the 1st, 180 pods; 2d, 200, and 3d, 215, containing in all 2780 beans.

SPORTING INTELLIGENCE

The two mile heats, which were run yesterday over the Union Course, for the Jockey Club purse of $200, afforded as great sport as ever was witnessed since the establishment of this course—the three heats having been so closely and beautifully contested, that each horse in his turn was the favorite; Sambo, to the astonishment of many, won, with apparent ease, the first heat, but not having sufficient strength and bottom to contend with the stock of Duroc, was forced to yield to his superior in Knickerbocker, who had to contest every inch of the two last heats with a young horse, full brother to Sir Walter, owned by Mr. Badger.

Knickerbocker,	2 1 1		
Sambo,	1 3 0	*Time*	*m. s.*
Restless,	3 2 2	1st heat,	3 53
Sir Rock,	bolted	2d heat,	3 50
Hickory,	4 drawn	3d do.	4 11
Mohawk,	distanced		

* * *

Sporting Intelligence.—Yesterday was the 3d and last day of the races, over the Union Course, Long Island. The heats were four miles, for a purse of $500. Three horses started, viz. Mr. Laird's sorrel mare Fancy, Mr. Colden's bay mare Daffy, and Mr. Bate's horse Prince. Fancy took the lead, kept it the eight miles, and won the purse. The bay mare ran handsomely, and kept close behind Fancy for seven miles, but gave up in the course of the last mile. Prince was no match for the mares, and was withdrawn after the first heat.—*Daily Adv.*

LITERARY INTELLIGENCE.

M. CAREY respectfully informs the citizens of the United States, that he hopes to be able to publish, in the course of the ensuing year, a work for which he made considerable preparations a few years since, viz: "*Sketches of a History of Religious Persecutions, in two volumes, 8vo.*"

Any information, or communications calculated to facilitate the execution of this work, will be thankfully received. Books leaned for the purpose will be carefully preserved, and returned uninjured.

Such printers of newspapers as are favorable to this undertaking, are requested to insert the above once or twice.

JONATHAN'S ACCOUNT OF THE CATTLE SHOW.

Did y'ever to the Cattle Show go?
What kicking, and pushing and goring—
Cattle in pens—the pens in a row,
And *tarnal* great hogs, there, a snoring.

There's sheep too; ewes and weathers and lambs;
Some *Bucks*; (some are'n't *in pens* far 's I know)
There's sheep of the Dons—some Uncle Sam's;
Some natives—some "real Merino."

There's a tug too, or trial of strength,
With hawing and geeing and scolding,
Just to twitch a great stone a foot's length;
Haw! haw buck!—why don't ye!—gee golding!

Then for ploughing they give a reward,
And *cute* as a squirrel that burrows,
Off start the ploughs, cut through the green sward,
A turning the *slickest* of furrows.

And then, sir, in a room that they've got,
There's an "ocean of notions" display'd,
There's blankets, and stockings and—what not;
That the folks in their houses have made.

There's bonnets, both of straw and of grass,
And cloth too, of woollen and linen,
And there's yarn and there's thread, smooth as glass
That *gals* for themselves have been spinning.

There's hats, and there's shoes, and there's leather,
And there's——I can't tell half now, I fear—
Got a prize—gee ho! altogether!
And I'd go to the show twice a year.

New-Hampshire Patriot.

THE FARMER.

BALTIMORE, FRIDAY, OCTOBER 31, 1823.

☞ THE WATER CART.—The remarks on this subject will be read with satisfaction, especially by those of our patrons who reside in the neighbourhood of the sea, bay, or salt water rivers, but the importance of contrivances, to facilitate the transportation and application of salt water, will be better understood and appreciated, when the value of salt itself, both as a manure, and as a wholesome condiment for the food of domestic animals, is more fully explained than it has hitherto been done in this journal. For this purpose we have commenced making some extracts from a pamphlet on THE USES OF SALT IN AGRICULTURE, republished at the instance of Judge Peters, who says of it in a letter to Messrs. M. Carey and Sons, the publishers:

"There is enough to satisfy the most incredulous; and to stimulate the friends to improvements in agriculture, most sedulously to pursue agricultural trials of this substance, in every way. Its usefulness both to preserve health, and to cure or palliate diseases, in our domestic animals, has been long known in this country. But our knowledge in this regard, is yet imperfect. I have long believed that the absence of various diseases among our stock, is attributable to the general use of Salt, both in their food and in remedies or preventives.

"I think the republication of the pamphlet here, will be of public benefit; and that you will, of course, be remunerated for the expense. Consistently with the credit of the press, the cheaper you can afford it, the more widely its circulation will extend. I conceive that agricultural associations could not do a more important service to the object of their respective institutions, than that of encouraging your republication; by taking a number of copies for gratuitous distribution. But this should not prevent every farmer whose circumstances will afford it, (and there are few indeed of a contrary description) from buying the pamphlet for his own use, and to promote the interests of his art.

I am, Your very obedient Servant,
RICHARD PETERS.

MESSRS. M. CAREY AND SON."

RULES AND REGULATIONS

To be observed at the Cattle Show, Exhibition of Manufactures, Ploughing Match, and Publick Sale of animals and manufactures on Wednesday the 5th and Thursday the 6th of November, 1823.

The members of the Maryland Agricultural Society, and all persons willing to become members, will meet at the Maryland Tavern, four miles from Baltimore on the Frederick Turnpike road, at 9 o'clock, A. M. to receive their badges from the Committee of Admission, at the entrance of the inclosure, on payment of the annual contribution of a sum *not less* than two dollars.

2. All stock entered for premium, or for sale, must be put into the pens, before 9 o'clock, A. M. of the first day under the direction of the marshals who will be distinguished by blue sashes.

3. Gentlemen who have fine animals, though not intended for premium will gratify the society by exhibiting them in the pens, appropriated for that purpose by the trustees.

4. The owners of stock are requested not to remove them from the pens, without previously conferring with the trustees.

5. All articles of domestic and household manfacture, must be exhibited on the first day of the show, between the hours of ten and twelve.

6. Machinery and articles coming under the head of "new inventions," will be exhibited on the lot adjoining the inclosure.

7. Butter and fermented liquors, will be delivered to the trustees, early on the first day, under a private mark or seal, as it is intended that the owners shall not be known, until the committees have formed their decision.

8. Competitors in the ploughing matches, are requested to announce themselves before twelve o'clock on the first day, to the committee having charge of that object.

9. Specimens of premium crops, must be delivered where practicable, on the first day of the exhibition, together with the necessary certificates and vouchers to the committee appointed in that case.

10. The owners of stock are requested to furnish placards, to be fixed on the pens, giving as far as practicable, the pedigrees of their animals, with the manner in which they have been reared

11. An auctioneer will be employed by the Society, to bid off the animals and articles on sale, free of charge to the owners; who are, however, expected to attend themselves to the delivery of the property and the collection of their own monies.

12. The Trustees not acting on Committees, will meet at their table, within the inclosure, at 9 o'clock A. M. on each day, to whom all persons having business with the society, will, in case of need, apply for information.

13. The various committees will be expected to withhold their decision, until they shall be formally conveyed in their Reports.

14. The Reports of the Committees will be made to the Society, and the premiums will be distributed by the President at the close of the ploughing matches, after which an election will be made of officers for the ensuing year. The Society will then dine together, and the proceedings will close with an Address, to be delivered by Gen. R. G. Harper, at the instance of the Trustees.

15. The inclosure is intended exclusively for the use of the committees, members of the Society, invited persons, and the owners of stock, and their attendants.—But the fields around the inclosure, commanding a perfect view of all things exhibited, will be free to all.

JAMES CARROLL, Jr.
J. W. M'CULLOH,
J. S. SKINNER.
Committee of Arrangement.

THE CATTLE SHOW.

The races have passed, and with no occurrence to excite regret at the *manner* in which they were conducted. Those only can find fault, who object to the *thing itself*—about the *use* of such public exhibitions people may differ in opinion, but in this case, the managers have taken care that no argument shall be established on the *abuse* of this amusement against the legitimate use of it.

But the publick attention is now invited to an exhibition about the use and value of which, no doubt exists with any portion of the community—we mean the Cattle Show and Fair, for the exhibition and sale of domestic animals, household manufactures, &c. &c. on Wednesday next.—This association is connected with all the most substantial and best interests of Society, and has no tendency to generate a single bad passion or immoral habit.

When it is considered how far the labour and expense of originating these exhibitions in Maryland, devolved on a few individuals, it is but fair that now, when their practicability and usefulness have been demonstrated, they should be sustained by the countenance and support of the community at large—every class whereof is in some way or other benefitted by improvements in the processes, implements and productions of *agriculture*.

We are authorised to state that there will be for sale at the exhibition, a number of sheep of the Bakewell and Merino bloods, and young horses, together with young cattle of the North Devon and Improved Short Horn breeds, and fat cattle of superior qualities. Arrangements are also made for a fair test and display of Pope's Threshing Machine, by the kindness of Mr. Anderson, who gives the use of his barn for that purpose—and well contested ploughing matches with oxen and with horses on ground well adapted to the purpose, will give to the scene additional variety and attraction.

The public sale of live stock will commence at 3 o'clock on the first day of the exhibition. The ploughing match with oxen and with horses, will commence at ten o'clock on the second day.—The trial of *Pope's Threshing Machine* will take place as soon on the first day, as the committee on machinery shall have been organised. The premiums will be delivered immediately after the ploughing match on the second day.

On that day the Society will dine together on the ground, and after dinner the exhibition will close with an address from Gen. R. G. Harper, prepared at the request of the Trustees, on the affairs of the Society, and the prospects and interests of American agriculture.

COMMODORE PORTER.

The trustees of the Maryland Agricultural Society, participating the common pleasure, experienced by their fellow citizens, on the safe arrival of Commodore Porter, after such severe sickness and exposure—and recollecrihg his efficient services at their last exhibition, have invited him to attend the exhibition on Wednesday next, and have requested his aid to decide on the claims of those who may compete for the premiums offered for agricultural machinery, and new and useful inventions. It is hoped that his appointment on the grand Union Canal Committee will not prevent his attendance here, as the Cattle Show closes on the 6th and the Canal Committee cannot well be organised before the 7th.

CANTON RACES.

Third Day.—For the purse of *one thousand dollars*, produced on Friday last, the best running which has yet been witnessed. The racers which started were Col. Johnson's mare *Betsey Richards*, General Winn's sorrel horse *Sumpter*, and Mr. James Howard's brown horse *Jim Crack*. They set out at the hour appointed, Betsey Richards in front, and Sumpter and Jim Crack close behind. Betsey Richards preserved her lead and came out ahead at the end of the heat—but the interest was greatly increased by the handsome performance of Jim Crack, and the close match of his speed with Sumpter, each being at times before the other during the rounds. The time of running the first heat—(four miles) was *eight* minutes, *five* seconds.

In the start of the second heat, Sumpter was for a moment in front; but Betsey Richards soon shot ahead and retained her advantage with apparent ease throughout the heat.

WASHINGTON RACES.

First Day.—The purse of $500, four mile heats, was won by Mr. Johnson's *Betsey Richards*, in two heats beating Mr. Winn's *Sumpter* with apparent ease, though the heats were well contested—the race being said to be a better one than that run betwen the same two horses at Baltimore.

Second Day.—Mr. Winn's horse *Vanity* took the purse of $200.

Mr. Wilson's *Experiment*, Mr. Ramsay's *Doubtful*, and Mr. Stonestreet's *Cornwallis*, were distanced the first heat.

In the second heat, Dr. Thornton's *Southern Eclipse* was distanced, and the heat was won with great ease by Mr. Winn's *Vanity*, beating Mr. C. Strother's *Atalanta*.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard street, from wagons, $6 87½—fine do. $6 37½—Wharf, do. $6 25—White wheat, $1 20 to 1 30—Red do. $1 12 to $1 15—Lawler, $1 17 to $1 22—Washington white, $1 20 to $1 35—Rye, 44 to 45 cts—Corn, 41 cts.—wharf Oats, 33 cts.—wagon Oats, 35 cts.—Beef, 6 cts. per lb.—Live Cattle, $5 to $5 50, per cwt.—Bacon, hog round, $12 50—Pork, $7 50 per c. lb., 6 to 8 cts. per pound—Mutton, 4 to 5 cts. per lb.—Beans, retail, $1 50, cargo price, 1 12½—Peas, retail, 75 a 80 cts., cargo price 58 a 60 cts.—Red Clover Seed, $6—Orchard Grass do. $2 50 Herds' Grass do. $2 50—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 33 cents per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, No. 1, $6 50, very dull, No. 2, do. $5 to $5 50, do.—Herrings, No. 1, $2 50 per bbl., very dull No. 2, $2 25 do.—Fine Salt, 75 cents per bush., coarse, do. 70—Butter, (firkin) 14 cts. per lb.—Eggs, 12½ cts. per doz.—New Hay, $14 per ton, old do $16—Straw, $9.

Maryland Tobacco.—No Sales—Kentucky 4 to 6 cents, and scarce.

For Sale at Auction.

The following valuable animals of improved blood, will be sold by auction on the 5th day of November next, at the Maryland Tavern four miles from Baltimore, on the Frederick road, at 3 o'clock, P. M.

THE FULL BLOODED STUD HORSE, Top Gallant five years old, of great beauty, and very gentle.—The colts of this blood are as remarkable for their excellence under the saddle, as they are for the turf.

THE FULL BLOODED GELDING, Speedwell, two years old, by old Top Gallant, from a full blooded Virginia mare.

A FULL BLOODED ALDERNEY BULL, being calved 5 months after his mother—landed at Baltimore from Guernsey.

TWO FULL BLOODED BULLS, of the mixed breed of the Devon and the Alderney; both the sires and the dams were imported.

A FULL BLOODED HEIFER, from an Alderney cow and Devon bull.

A FULL BLOODED DEVON HEIFER, 2 years old, in calf by a Devon bull.

SIX HEIFERS, half bloods of the Alderney breed, in calf by an Alderney bull.

SIX HEIFERS, three quarter and half bloods of the Devon breed, in calf by a Devon bull.

THREE BULL & THREE HEIFER calves of three quarters blood, of the Devon breed.

☞ Cash for all purchases under $100, will be required—three months credit for all above $100, and under $200—and six months for all above $200—interest, with approved endorsers, payable at Baltimore.

For any other particulars, apply to J. S. Skinner, Editor of the American Farmer.

J. G. WALMSLEY,
manager for R. Caton, at his farm at Brookland Wood.

Brookland Wood, October 29, 1823.

Improved Stock.

The following young stock will be offered on sale at the Exhibition of the Maryland Agricultural Society, to be held next week, viz:

Two fillies, from a celebrated Tom mare, one 4 years, and the other 2 years old.

One filly, from a full blood Virginia mare, 2 years old.

Two colts, from a handsome country mare, one 4 years, and the other three years old.

The sire of the above mentioned animals, was the beautiful imported Arabian horse, ARAB.

A colt from a full blood Virginia mare, sire the full blood horse Clifton; he is 15 months old and and well grown.

A mare mule, from a fine large mare, by the imported Maltese jack, Sancho.

A very superior young bull, 8 months old, from an excellent cow, sire the "improved *short horn*" bull Champion.

Two half blooded Alderny heifers, 18 months old, from good cows, sire "Mark Anthony."

AGRICULTURE.

FROM THE NEW ENGLAND FARMER.

REPORTS

Of the Committees of the Massachusetts Agricultural Society, as to the premiums awarded at the Cattle Show and exhibition of Manufactures, held at Brighton, on Wednesday and Thursday, the 15*th and* 16*th of October*, 1823.

First Committee, on Fat Oxen, Bulls, and bull calves. The President, assisted by Hezekiah Gates, Esq. of Marlborough, and —— Perry, Esq.

As chairman of the committee on certain descriptions of live stock, I am about to report the decisions of that committee, and to award the premiums to the successful competitors.

Before doing it, however, I hope I may be indulged with some prefatory remarks. They will be as *short* as I can make them, because I know the impatience of those who hope to find that they are among the *fortunate*, and I have not the vanity to believe, that I have the power either to instruct or entertain you—what I shall say, will be directed solely to the object of reconciling those who may be disappointed, not only in the awards of *this* committee, but in those of all my brethren, and their assistant judges.

It would not do to compare this exhibition to a *lottery*, for that would imply the absence of all skill, and judgment, and anxiety to do right; while in *this* case, *every* expedient has been adopted to secure competent skill, to exercise the soundest judgment, and with the deepest desire to give a just and impartial decision. We select the most experienced judges of animals—men, above temptation, or bias. They undertake this laborious and unthankful office, without the hope, or the wish, of any other reward, than the promotion of the public good. We choose the best farmers as judges of working cattle, and ploughing. We *seek out* the ablest and most skilful mechanicians, (need I name such men as Mr. Moody, of Waltham, and Mr. Alger, of South Boston ?) to judge of new inventions—we invite experienced importers or venders of manufactured goods, to examine the various and constantly increasing articles, which the ingenuity and taste of a country, preeminently distinguished for its inventive powers in objects of science and taste, the country of Fulton, and of a *greater* name, of Perkins, are constantly adding to the common stock.

It would seem, then, that we have done every thing in *our* power to secure intelligent and impartial awards—yet it must be seen and felt by every one, that in *one* respect, and in *one* respect only, a cattle show resembles a lottery—that point of resemblance is, that *as* in a lottery, *so* in these exhibitions, there are *many* blanks, and but *few* prizes—and would any fair man, and disinterested friend to agriculture and manufactures wish it to be otherwise? Would it be desirable, that *all* should draw prizes? There would be an end at once to all competition—there would be no reward to those, who by *patient* care, and cultivated ingenuity, had reared superior animals, or produced a fabric of superior beauty and durability. The very intent of these shows is to *discriminate* and reward *superior* exertions, and to encourage those who have come a *little* short of the prize, this year, to make their utmost efforts to excel in another. It cannot be too often repeated, that the task of judging is as *delicate*, as it is laborious and unthankful. It is unthankful, because the *disappointed* much outnumber the *successful* candidates. It is also unthankful because the committees may occasionally (though not often) differ from the *public* opinion—yet an intelligent and impartial public, and a fair and generous competitor will admit the serious difficulties in the case, and that it is scarcely possible, that all men will think alike as to the *beauty* of an animal, any more than they agree in the relative beauty of their wives and children,—neither will they be more likely to agree in the other qualities of the animals, their aptitude for labor, their disposition to fatten—and still less, can uniformity of opinion be expected in the varied and ever changing forms, so arbitrary as in *fancy* articles of *manufacture*.

Having made these general remarks, applicable to all my friends and associates,—I will add one or two peculiarly adapted to my own branch of inquiry and decision.

As to fat cattle, there can be little difference of opinion. The animal has then run through his course—has performed his destined, and faithful and invaluable labors, to man, and by a hard, but *inevitable* fate, he is to be submitted to the knife, and the sinews and muscles which turned the sod, are to be converted into the sustenance of man. He is, *when so fatted*, in his most perfect state, and skilful men (such as I have had the pleasure to be associated with,) can *then* decide, which animal is, on the *whole*, the best. They can do this with so much accuracy, that they can *lay the ox* (as the phrase is) within a score of pounds of his *actual* weight, and they can even decide in most cases the quantity of fat, or tallow, which will be found in parts concealed from the eye.

Not so as to the *bull*. In judging of a bull, *many* properties, or qualities, are to be taken into the estimate—his carriage, whether erect or grovelling—his temper, whether ferocious or tractable—his eye, whether full or sunken—his neck and head, whether thin and delicate, or thick and fleshy—his coat, whether coarse, like that of a buffalo, or fine like that of a full blooded racer—his limbs, whether stubbed and thick, like those of an elephant, or delicate denoting activity and power, like those of an antelope—his forehead and chest, whether deep and powerful, indicating that he will produce a progeny calculated to tear up the stiffest soil, and to remove the heaviest rocks—and a hind quarter, fitted with muscles, which when properly loaded with fat, will furnish an abundance of delicious food. There are many minor properties, such as the straitness, and breadth of the back, and the elevated insertion of the tail, known to good judges, which I forbear to notice.

But my enumeration will satify any reasonable mind, that it is not *size alone* which can determine the preference, and that it is no light or trifling task to decide upon the properties of that noble animal, the bull—the parent, and the most important parent, of our most valuable domestic animal. I would not be *misunderstood*, when I call him the *most* important parent, I mean it simply in *this* sense—while *one* cow can only transmit either her good or bad qualities to eight or ten individuals, a good or bad bull, may convey his good or bad properties, to some hundreds.

The remarks I have made as to bulls, are equally applicable to *bull calves*, with one exception, which I beg every intelligent farmer to weigh. Bull calves are imperfect animals in a state of growth, often preternatural growth—as in man, we find children, often disproportioned, when growing, and at mature age of the most perfect proportions; so bull calves of little promise, often become perfect specimens of their species, and the most perfect calves, when young, not unfrequently prove distorted, or coarse or ordinary, when arrived at maturity. I entreat your patience for these details, which seemed to me, however, necessary.

We award the first premium for a fat ox, to Asa Pond, of Petersham—weight 2597 pounds,	$30
The second premium for a fat ox, to Samuel Bowen, of Adams, in Berkshire,	25
The third premium for a fat ox, to Amos Davis, of Groton—weight 2200,	15
The first premium for bulls, to Col. Jaques, of Charlestown, for his red bull, called Middlesex, out of Cœlebs, owned by him,	30
The second premium to Samuel Keir, of Charlton, for his bull out of *Holderness*, owned by Gorham Parsons, Esq. of Brighton, and much approved in that part of Worcester,	20
The third premium to Col. Jaques, of Charlestown, for his bull out of Cœlebs, called "Yankee,"	10
The first premium for bull calves, we award to Jacob Sawyer, of Westminster, for *a native bull calf* of a breed that has often gained our premiums, weighing at 7 months old, 725 pounds,	15
The second premium for bull calves is awarded to John Brown, of Dudley, for a bull calf of the Holderness breed,	10
The third premium for bull calves is awarded to Silas Stone, of Sherburne, Middlesex, for a calf out of Fill-pail's progeny, owned by Mr. Abner Wheeler—Note, Fill pail was presented to the Society by Col. Thorndike, and imported from the Netherlands. His progeny in the third degree inherit fully his qualities,	5

There were several other fine bull calves, among which I am requested by the committee to notice that of Nathan Nichols, of Malden, out of Cœlebs; that of William Dodge, and that of Daniel Stephens, of Marlborough.

Among many excellent bulls not included in the premiums, were a bull from Denton, by the Hon. Mr. Welles; Jupiter a white bull, of Col. Jaques—The bull of Henry Rice, Esq. of the same breed, and a native bull, exhibited by David Perham.

It will be seen by this enumeration, that even the second and third crosses, from the imported bulls, have carried the premiums, and yet it was not in any degree owing to any influence which I, as a trustee, exerted over two very respectable citizens from the interior—I am only the organ to communicate their opinion, carefully formed, and cautiously expressed. It will however, be seen, that some native bull calves, of a superior stock, carried the two first premiums—a proof that we need selection and care only, to make our own breed equal to any we could import. Yet we must rejoice at the opportunity we have had to cross our breed with the most improved of foreign countries. If no other effect should be produced, than that of exciting attention to the improvement of our native stock, all the care and expense hitherto bestowed would be only as the chaff is to the plump and healthy grain.

JOHN LOWELL, *Chairman*,

N. B. There was a cow exhibited, owned by Charles Vaughan, Esq. of Hallowell, which for several accounts, did not come within the list of our premiums.—Yet it would be improper not to notice her—she was from an imported breed, of great value, and she was without question one of the most perfect animals ever exhibited in Brighton.

A FINE COW.

In a note attached to the Report of the first committee on stock, exhibited at the late Brighton Cattle Show, of which Mr. Lowell was chairman, notice is taken of a cow exhibited, owned by Charles Vaughan, Esq. of Hallowel, "from an imported breed, of great value, and without question one of the most perfect animals ever exhibited at Brighton." This cow, we learn, has since been slaughtered, and her weight was as follows:

Hide	79 lbs.	
Tallow	98	
	175	2 hind quarters.
	168	
	190	2 fore quarters.
	198	
	908	whole weight.

This fine animal, we are assured, has been at grass all the season, and had no provender till within a few weeks. This fact, considered in addition to her beautiful form, must place her high in the estimation of good judges of neat cattle. It proves her to have been one of those animals which possess a great aptitude to fatten, a quality held in high estimation by judicious and calculating graziers.—*Editor New England Farmer.*

REPORT No. II.

The committee on milch cows, heifers, sheep and swine, consisting of E. Hersy Derby, Esq. Willard Gay, Esq. of Dedham, and Abner Wheeler, Esq. of Framingham, report:

That there were three premiums offered for milch cows, for which there were twelve candidates, and after long deliberation they have awarded the premiums in the following manner—The 1st premium of $30 to the Rev. John B. White of East Sudbury—2d do. $20 to the Rev. Samuel Capen, of South Boston—3d do. $15 to Henry Rice, of Boston, for the Duches of Marlboro'.

Mr. White who received the first premium, furnishes the following statement under oath.—His is a native cow, raised by Mr. Noah Smith of Sudbury, is nine years old, and came into his possession in the spring of 1821. She calved on the 28th of May, the calf was killed the 11th of July. She has furnished 156 lbs. 9 oz. of butter, besides furnishing the family with a supply of milk. Weight of one quart of her milk 2½ lbs. Weight of milk given in a day when the calf was a week old, besides what he would take, 35 lb. 8¾ oz. Weight of milk when the calf was three weeks old 32 lbs. 13 oz. Weight of milk given on the day after the calf was killed 60 lbs. On the 27th of Sept. weight of milk given in one day, 38 lbs. 12 ozs. 15 qts. 1 pt. On the 11th of Oct. 36 lb. 14 qts. 3 1-5 gills.—From this it appears that the mean weight of milk given by the cow from the time when the calf was killed to the present is 48 lbs a day. It also appears that when the calf was killed she gave milk at the rate of a barrel of 32 gallons beer measure in 5 1-3 days, and that she now gives milk at the rate of a barrel in 8 days and 8-9 of a day.

Mr Capen who received the second premium, stated under oath that his cow was raised by himself, is from a superior native cow and a bull of the Hon. John Welles's stock—is eight years old, calved the 2d May, since which she has furnished 202 lbs of butter; her greatest quantity of milk has been about 16 quarts per day, of very rich quality.

Mr. Rice stated that his cow by Denton was three years old last February, she calved July 27; she has given from the 9th of August, to the 13th Oct. 65 days, 2481 lbs. milk, averaging 38 1-5 lbs. per day.

The committee noticed with much pleasure two other very fine cows, one belonging to the Hon. John Welles, the other to Mr. Luke Fiske.

There were twenty-four heifers entered for premiums, and your committee had only three premiums to award. Among so many very fine animals, they found it extremely difficult to decide, and regretted that no distinction had been made in the premiums between those which had calved and those which had not. But taking into view every circumstance, they have been induced to award the first premium of $15 to Mr. Samuel Jaques of Charlestown, for his full blooded short horned heifer of 16 months.

The 2d premium of $10 to Major Benjamin Wheeler of Framingham, for his part blooded heifer of 14 months old.

The 3d premium of $7 to Col. Joseph Valentine of Hopkinton, for his native heifer of 17 months old.

The committee were highly pleased with several other heifers, and regret that they could not award more premiums. They feel desirous of noticing in a particular manner the five heifers by Denton, owned by his Honor Levi Lincoln, of Worcester, also five heifers offered by the Hon. John Welles of Dorchester, 1 by John Pierce Esq. of Roxbury; 2 by Jacob Knapp Esq. of the same town; 1 by George L. Stearns, of Medford; 1 by Samuel Brooks of Brighton; 1 by the Rev. Lemuel Capen, of South Boston; 1 by Dr. Codman, of Dorchester, and two full blooded young heifers by Col. Samuel Jaques of Charlestown.

In deciding the premiums on Merino Sheep, they have been governed more by the fineness of the fleece on every part of the same, than by the size and appearance of the animal, and have therefore awarded

To Samuel Henshaw, of Boston, the first premium for the best Merino ram,	$15
To Samuel Jaques, of Charlestown, the 2d do.	10
To Samuel Henshaw, of Boston, the first premium for Merino Ewes,	20
To Samuel Jaques, of Charlestown, the 2d do.	10

There were several other lots of Merinoes, all of which the committee thought very highly of, several of which were very much superior in size and appearance to the ones to which they have awarded the premiums, but the quality of their wool was not of such exquisite fineness throughout. There were no Merino or native wethers offered for premiums—They were much gratified by the appearance of four long woolled sheep from the Netherlands, imported by Col. Jaques, who has made great exertions to introduce fine breeds of sheep into the country, but as the Society have not offered a premium for sheep of that kind, they could not award any.

The committee award for the best boar, the 1st premium to Gorham Parsons, Esq. for his Cobbet and Wellington boar	$12
For the 2d best to Silas Dudley, of Sutton	8
For the 3d, to Francis Moore, of Brighton	5
For the best Sow, to Silas Dudley, of Sutton	12
For the 2d best, to Gorham Parsons, Esq. for his Leicester sow	8
For the 3d, to S. W. Pomeroy, Esq. of Brighton	5
For the best store pigs, to Josiah P. Kenny, of Roxbury, the 1st premium	10
For the 2d best, to Luke Fiske, of Waltham	5
For the best spayed sows, four in number, to T. P. Mariam, of Concord	20

[Your committee were much pleased with the appearance of these animals. Mr. M. furnished them with a description in writing of his mode of operation.]

Mr. Parsons desires the committee to state that he relinquishes the premiums awarded to him for his swine, having intended to enter them for exhibition only.

All which is respectfully submitted.

E. HERSY DERBY, *Chairman.*

REPORT No. III.

BRIGHTON, October 16, 1823.

The Committee on Agricultural Inventions, Report:

That among the articles presented of this description, Safford's straw cutter, is in their opinion entitled to the Society's premium, from its great simplicity as well as its effectual operation. The motion is communicated to the feeders directly by a double threaded iron screw, without bands or any complicated machinery. The knives are flat and oblong, and affixed to the radius of an iron wheel, and fixed and unfixed, and regulated with the greatest ease.—The whole expense of the machine is fifteen dollars. It is said that it will cut a bushel of straw in a minute; and the testimonials in its favor are of the most decisive character, given by persons well acquainted with the use of such machines, who certify that "it exceeds any other they have ever seen, for cheapness, simplicity, despatch and durability." Your committee therefore award to Mr. Safford the Society's premium of $20.

A machine, called Jaquith's threshing machine, was presented for premium by the inventor. It is chiefly characterized by its being the application of the same wheels to the action of flails, which are fed by geer, or bands. The operation of the machine is very simple and effectual, and in the opinion of your Committee is the best, which has yet been presented, for *mowed grain.* Its expense is thirty-five dollars, when prepared for the hand, and seventy-five dollars when prepared for the horse power. Your committee deem it entitled, and accordingly award a premium of $20—the proprietor adducing certificates, to the satisfaction of the chairman, that the machine has been used and approved by some practical farmer.

Walter Janes presented for premium, a corn shelling machine, the principal component parts of which were a fluted cast iron cylinder hung under the segment of another fluted cast iron inverted cylinder. Without attempting further to particularize its conformation, your committee deem it sufficient to state that it performed its operations well, and is in their opinion an useful machine. Your committee do not however, deem it so decidedly, if at all superior to machines, for a similar purpose used in this vicinity, as to justify them in awarding any premium; although they deem it well adapted for its purpose.

A shearing machine, presented by John T. Cambridge, of Springfield, Vermont, the operation of which is chiefly characterized by the horizontal motion and sliding action of the knife, by which it differs from similar machines in common use in our manufactories. It is a machine extremely handsome in its structure, and performs its work well—but not coming under the head of agricultural implements, is not embraced within the sphere of the premiums, or the authority of the Society.

The same remark applies to a machine denominated "Jenck's Alleviator." This your Committee apprehend to be a very excellent invention, and is very powerfully recommended by Dr. Warren, of Boston, and others, for the raising of persons whose limbs are fractured, while in bed, with great ease and safety. While your Committee consider it a machine of great practical utility in hospitals and sick chambers.

they deem it not within the objects or power of this Society to award to it a premium.

Various agricultural machines were presented for exhibition only—among these your Committee particularly notice Mr. Pope's threshing machine, which on a former year obtained the Society's premium. It has been since improved, and now can thresh, as it is stated, with a hand power and the assistance of three men, from eight to ten bushels of grain per hour—and enlarged, to the application of a horse power, will thresh per hour, from ten to fifteen bushels of wheat, and from fifteen to twenty of rye or oats.

Messrs. Lincoln Fearing & Co. also presented for exhibition a variety of agricultural implements, consisting of forks, ploughs, Eastman's straw cutter, from Baltimore, and Curtis's churn, from Connecticut; all of them to be found in their excellent and extensive collection of agricultural implements in Boston, and all machines of different degrees of merit, the particulars of which your Committee did not deem themselves called upon to estimate. They cannot fail however, to express their gratification at the particular exertions of Messrs. Lincoln Fearing & Co. as well as at the general evidence of the increasing attention of the community to implements tending to improve and to lighten the labors of agriculture.

JOSIAH QUINCY,
CYRUS ALGER,
PAUL MOODY.

REPORT No. IV.

Brighton, *Oct* 16, 1823.

The Committee on Manufactures award

To James Shepherd & Co. of Northampton, for the best specimen of Broadcloth,	$20
To Slater & Howard, of Oxford, for the next best,	15
To Thomas Dedman, of Templeton, for the best specimen of Woollen Cloth, of household manufacture,	12
To George M. Barrett, of Concord, for the next best,	8
To James Shepherd & Co. of Northampton, for the best specimen of Cassimere,	12
To the Wolcott Woollen Manufacturing Company, for the next best,	8
To Lincoln Burr, of Hingham, for a piece of Kersey, 2d premium,	8
To Messrs. Pomroy & Clapp, of Pittsfield, for the best specimen of Sattinet,	8
To Seth Bemis & Co. of Watertown, for the next best,	5
To Mrs. Stephen Fay, of New Braintree, for the best specimen of household Flannel,	10
To Jonathan Wilder, of Sterling, for the next best,	7
To Ephraim Coburn, of Dracut, for the best specimen of Linen Diaper,	5
To Gideon Delano, of New Braintree, for a piece of Linen Cloth,	8
To John Hunter, of Braintree, for the best specimen of Floor Carpeting,	15
To Joshua Melville, of Concord, for the next best,	7
To Benjamin Poor, of Newburyport, for the best piece of Stair Carpeting.	10
To Theodosia Converse, for a specimen of fine Blankets,	6
To Anna Buckman, of Tewksbury, for a specimen of Linen Diaper Table Cloths, Worsted Stockings, and Work Basket (as a gratuity)	3
Also to Polly Leland for a piece of Cotton Diaper,	5
To P. Sanford and brother, of Medway, for a specimen of fine Cotton Thread,	5
To Elizabeth Cowan, of Boston, for a specimen of Thread Lace,	3
To Ann Heath, of Roxbury, for 13 pair of Cotton Stockings,	5
To Mary Ann Plimton, of Medfield, for a Straw Bonnet,	4
To Olivia Stanley, of Dracut, for do.	3
To Eunice Danforth, of Norton, for two extra Fine Straw Bonnets,	5
To Martha Hapgood, of Shrewsbury, for a Bonnet,	2
To Lavina Sweet, of Foxborough, for a Bonnet made from the husks of corn,	3
To M. W. R. of Boston, for a Cotton Counterpane,	5
To Misses Baxters, of Quincy, for a Hearth Rug,	3
To Sarah Cushing, of Dorchester, for a Rug,	3
To Jane Coburn, of Dracut, for do.	2
To Betsey and Mary Munroe, of Lincoln, for two Hearth Rugs, each,	2
To Caroline Cutting, of E Sudbury, for do.	2
To Mehitable Dean, of Mansfield, for do.	2
To Louisa Clark, of Boston, for do.	3
To Susannah Whiting, of Cambridge, for do.	2
To Anna Bemis, of Watertown, for do.	3
To Mary B. Converse, of New Braintree, for do.	2
To Mrs. Elijah Warren, of Leicester, for do.	2
To Catharine Pierson, for 3 pair of fine Worsted Hose,	2
To Hannah Hawks, of Sterling, for do.	2
To Frances, Nancy, Elizabeth, and Abiel Wheeler, of Worcester, for a specimen of Artificial Flowers, exhibited, as the work of young children each,	2
To John Thoreau & Co. for a specimen of Lead Pencils, manufactured from Plumbago, native of this country.	5
To Marian R. Haven, of Hopkinton, for 2 Straw Bonnets, and Calash of Straw	4
To Sarah Pollock, of Canton, for a grass Bonnet,	4
To Susan Whitney, of Dedham, for do.	2
To Abigail Goodale, of West Boylston, for wrought Buttons and Frogs,	2
To Nancy Wheeler, of Worcester, for Tippets of Turkey Down,	2

A bonnet from Plymouth, made of white paper, was considered by the Committee a curious and ingenious article, but they doubted whether it could be sufficiently serviceable to merit encouragement.

The number and amount of premiums on Factory Goods having been diminished since the last year, in favor of household fabrics, Factory Flannels were not a subject of premium the present year.

The best of the specimens sent for exhibition from the Amesbury Flannel Manufactory, were very fine and of excellent materials, and in all respects well finished. There were pieces of different qualities but all creditable to the Company.

The Committee can say no less of the six pieces exhibited by Mr. James Howorth from his Factory at Andover.

The four pieces from the Salisbury Woollen Manufactory were substantial goods, but not in a finished style.

Many of the Specimens of Household Industry, exhibiting a commendable taste, ingenuity and skill, are not rewarded by gratuities, not because they were undeserving this distinction for deficiency in the qualities mentioned, but because it was necessary to put a limit somewhere to this kind of reward—the committee have therefore conferred it on some of the most useful articles only. Much praise, however, is due to Miss Merrill, of Salisbury, for a parcel of fine linen thread—to Hannah Edson, of Hardwick, for worsted socks—to a lady, of Plymouth, for a paper bonnet—to T. P. Merriam, of Concord, for a specimen of stocking yarn and a pair of socks—to Mrs. Robinson, of Worcester, for stockings and socks, and to Mary Adams, for a specimen of good carpeting.

The pieces of calico from the Charleston Bleachery (a recent establishment) were thought by the committee to be excellent goods, and far preferable for durability to English callicoes of the same description.

A very fine beaver hat was exhibited by Messrs. Dikeman & Shepard, of Northampton. The committee could conceive of no improvement beyond it

The case of hats, from the Boston Manufacturing Company, were of the first quality of gentleman's hats. This Company have in former years deserved and received the commendation of the committee on Manufactures, whose favorable judgment has been confirmed by the public. It is understood that the importation of men's hats, even of the best qualities, is now very small.

The two parcels of sail cloth, one by Mr. George B. Chase, of Salem, the other by Mr. George Johnston, of Cambridgeport, were pronounced by competent judges to be without fault, and these gentlemen have therefore secured to themselves a good prospect of the public patronage.

Four pieces of black Broadcloth, offered for exhibition only by the Wolcott Woollen Manufacturing Company, were very creditable to the makers, and with a little more skill in the finishing would have approached very nearly to those which obtained the first premium.

The best of the Broadcloths, Cassimeres, and Sattinets, were much superior, in all respects, to the same quality of goods exhibited at Brighton in any previous year.

RICHARD SULLIVAN, *Chairman.*
EDWARD TUCKERMAN,
JOHN LEMIST.

EXTRACTS

FROM MORE MODERN WRITERS ON THE USE OF SALT IN AGRICULTURE.—No II.

From a Pamphlet entitled "Hints to Country Gentlemen and Farmers, on the importance of using Salt as a general Manure." By the late J. Hollinshead, Esq. of Chorley. Third edition, 1802.

"Salt" says Mr. Hollinshead, "will be found to be the cheapest, best, and most durable manure ever yet made use of: and for the readier distribution of this most excellent manure through the kingdom, the public and enterprising spirit of the nation has of late years provided very ample and cheap conveyances to almost any part of the country, which the gentleman farmer can wish, by means of the numerous navigable canals, which are either finished or projecting in almost every direction. Salt may be laid on the banks of the *Staffordshire* canal at fourteen shillings per ton; from whence, by means of the Oxfordshire Grand Junction, and other canals it will with the greatest ease, be conveyed to any part of the south of England, at a very trifling additional expense."

"Suppose a farmer to live twelve or fifteen miles distance from any canal, navigable river, or part of the sea coast (which in general, perhaps, will be found to be the greatest extent he can have to fetch it,) from whence he can import Salt for the benefit of his lands; even at that distance, his team will fetch a load of Salt in one day, say at the expense of ten shillings; and with that team he will convey home one ton of salt; therefore, for fourteen shillings, the original price of the salt, five shillings (more or less) for the freight by the canal, river, &c. and ten shillings for the carriage home, he lays in his own field manure sufficient for two acres and a half of land, at the small expense of one pound nine shillings. What a vast superiority, in point of expense, this would have over all the manures now in use; for lime, dung, or marle, even where most plentiful, on account of their great bulk, cost more in the single article of cartage, without regard to the expense of buying or digging for them, than the whole charge of salt when laid upon the ground*. Besides, as so *small* a quantity of salt in weight will serve for manuring lands, this is no inconsiderable recommendation, because on that account it may with ease be conveyed to the *most rough, steep, and mountainous* parts of the country, to which the bulky and heavy manures now in use, could not be carried, but with infinite labor, and at an expense far exceeding all the advantages to be expected from it."

"That common salt is an excellent manure, experience, the most satisfactory of all evidences, clearly proves. It was used round Droitwich, in Cheshire, as a manure, so long as foul salt was permitted duty free, with very great success."

"Nothing in nature is so powerful as salt, to meliorate and drain strong and stiff soils, and also to give moisture to dry ground: it is also a certain destruction to weeds and insects. Besides its efficacy on corn and fallow grounds, its excellent qualities in giving luxuriance and salubrity to grass lands are peculiarly worthy the attention of the grazier and breeder of cattle."

"When a farmer intends to fallow a piece of ground, he ought first to sow it with such a quantity of salt as would be sufficient to *destroy* all vegetation, viz. forty bushels per acre†; which by cutting and dividing the viscous substances which are in the earth, would reduce it into a proper state to become food for plants. The farmer must take notice, that this salt is to be sown on the ground some time before he begins to work his fallows with the plough (the autumn will be the most proper season,) in order to give the salt sufficient time to destroy the grass and other roots upon it, before he begins to work it. The salt being thoroughly mixed and incorporated with the soil, during the spring and summer following, whilst the land is on the plough, will by the time the seed is sown upon it, be reduced to that strength which is the most proper for effectually and vigorously assisting and supporting vegetation while the seed is on the ground, and such lands will be found to produce a crop superior to those under any other mode of cultivation."

"What a striking and manifest superiority is here observable in favor of manuring with salt, which does, as it were, itself, in a good measure prepare the soil, before its nutritive operation takes effect; and thus having cleared the ground of all extraneous and pernicious weeds, gives room and full scope to the genuine plant."

"This method of sowing the intended fallows with salt will, therefore, serve much to lessen the labor of the husbandman in working his grounds; for the tough and adhesive clods and lumps which are generally so troublesome, especially upon clayey soils, will be so completely broken and dissolved by the operation of the salt, as to give much less obstruction to the harrow at the first working."

"In deep, loamy, dry earth, upon which wheat has grown, after the crop is got in, the land should be ploughed, and lie in that state until the spring, when it must be cross-ploughed and wrought fine with the harrow, and planted with potatoes: as soon as the potatoes are covered with earth, then sow or spread sixteen bushels of salt per statute acre upon them; and when they are dug up in the autumn, then sow a crop of wheat again, taking care to pick all the potatoes clean out, that they may not injure the wheat in the following spring by growing up amongst it. By this method of cultivation a crop of wheat, and another of potatoes, may be produced alternately on the same ground *forever*, instead of losing a whole year's produce, according to the old custom, whilst the land is fallowing."

"For other corn lands sown in the usual way, after a spring ploughing, the best method will be to sow sixteen bushels of salt per acre, immediately after the grain is covered in by the harrow; this, by meliorating the soil, destroying weeds and insects, and attracting moisture, will produce an abundant crop; and by sowing ten bushels per acre *annually*, these lands will ever after be exceedingly productive."

"There is still a further advantage, which is highly worthy the farmer's attention, which is, that by having constantly a plentiful supply of such a cheap manure, he can always keep his grounds in a condition fit to receive any kind of grain which he would wish to sow upon it, which at present is far from being the case: for instance, if he now wishes to sow a crop of wheat, he cannot do it without lime or marle; if he would plant potatoes, it cannot be done without a large quantity of dung, which if it is of his own producing, he will impoverish his other lands while he enriches this; if he buy it, it must be at an enormous expense, and also to the proportionate injury of the district from whence he procures it, where it ought to have been expended; and therefore, though it should enrich an individual, it will not be of the least advantage in a public point of view, which undoubtedly ought principally to be attended to in things of this nature. Also, when a person enters on a poor farm, unless he be possessed of a larger capital than usually falls to the lot of this most useful class of mankind, with all the industry and management of which he is master, his lease, nay even his life, may be expired before he has manured one-half of his estate, and generally speaking, the parts which he first tilled will be reduced to their former poverty, before one-fourth of the farm has received any benefit."

"But if he were permitted the use of salt, duty free, with a very moderate sum of money, he would have it in his power, in a few years, to bring his farm into the highest state of culture and fertilization; so that at all times he would be enabled to bring to market those articles, which his situation, or the particular necessity of his neighbors, pointed out as most beneficial to himself.",

"Another considerable advantage would arise to the occupiers of small farms in particular, and especially those with large families, from manuring with salt, as they would be enabled to raise, not only a much greater *quantity*, but also a much greater *variety*, of the common necessaries of life, from the same extent of ground. For example:—a man who rents a few closes of land gets, perhaps, nothing but milk and butter from his little farm, whilst he has the most substantial part of the sustenance for his family (bread) to buy, generally at a high price. But give him salt, duty free, and he may pitch upon one field which with the assistance of this manure, will produce him abundant crops of grain annually for ever, whilst his other fields will remain unmolested, and if also salted, covered with the most luxuriant and wholsome herbage for the use of his cattle. At present, if he ploughs at all it must be in rotation, or as the farmers term it, in *shifts*, and by that means he is constantly injuring his grass-lands.

"When salt is used upon pasture lands, it may either be sown upon them in its simple neat state, after the rate of sixteen bushels* the acre, or mixed with compost, mud, or loamy earth; sixteen bushels of salt to twenty loads of earth, and turned in the heap two or three times to incorporate it properly; this compost should be laid on and spread in the autumn.

"For meadow-lands, we would advise the farmer to sow six bushels of salt per acre, immediately after the hay is got in. This would be found peculiarly beneficial in hot and dry summers, and upon lime stone and sandy soils; which after they are mown, are often so much parched by the heat of the sun, that not only the eddish is destroyed, but also the crop of the ensuing year is very materially injured; but by sowing it with salt, moisture would be attracted and retained, sufficient to assist vegetation so powerfully, as in a short time again to cover the face of the ground with grass, and by that means effectually to screen the roots, which would otherwise be too much exposed to the direct rays of the sun.

"It may, indeed, be said that dung will answer the same purpose: in some degree it might, but dung cannot always be had, never in sufficient quantities: besides, if it could, this objection lies against it, that neat cattle will not eat the eddish after dung, consequently one valuable crop is lost to the farmer, which, if salt were used would be both productive and wholesome. Also, the hay, when put into the mow or stack, should be sprinkled with salt on every layer. When hay is housed soft, this should never be omitted, as it would prevent what the farmers call the *mowburn*, and make the hay far more pleasant and nutricious for the cattle in winter."

"Mr. Beck, gardener in Chorley, has constantly made use of salt in his garden for upwards of thirty years, principally upon his onions; and he has invariably found the salt to exceed every other kind of manure which he could have used for the like purpose; his method is to sow the salt immediately after the seed is covered in. But as he never had any thought of communicating his observations and experiments to the public, he took no care to ascertain the exact quantity necessary to be sown on an acre, and proportionably upon any smaller quantity of ground; yet he thinks, if he might hazard a conjecture, that he has not sown *less*, and probably *more*, than *sixteen* bushels per acre. One year, by way of trial, he sowed the usual quantity of salt upon a plot of onions, *after* they had begun to show themselves above ground, and the crop so far from being improved, was entirely spoiled; from this he infers, that the experimental gardener, who may be inclined to make use of salt, will do well to throw it on as soon as possible after the seed is sown."

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* *This goes on the presumption of Waste-Salt being allowed the farmer duty free; but even with the present duty, a ton of Rock-salt, containing forty bushels, may be put on board a boat on the canal for five pounds ten shillings.* S. P.

† *I think it necessary to remark upon these directions, that I believe the writer is here, and in the former extracts, speaking of* foul *Cheshire Salt, such as at that time was allowed to be used for land. Therefore in using Rock Salt, only half the quantities which he mentions ought to be employed.*

* *I think it necessary again to caution the farmer against using this quantity of pure salt upon grass-land, as it probably would burn up the grass. The writer speaks all along of foul waste salt, which was seldom more than one-third of it real salt.* S. P.

(To be continued.)

NATURAL HISTORY. No. 3.

[*Continued from page* 250.]

Changes take place in the Color of the Clothing.—The distribution of color in the animal kingdom, appears to be connected with latitude as correlative with temperature. In the warmer districts of the earth, the colors of man, quadrupeds and birds, exhibit greater variety, and are deeper and brighter, than in the natives of colder countries.

Among the inhabitants of the temperate and cold regions, there are many species, which, in reference to the color of their dress, do not appear to be influenced by the vicissitudes of the seasons. In others, a very marked difference prevails between the color of their summer and winter garb. A few of the more obvious instances of these changes, in British species, may be here produced.

Among quadrupeds, the Alpine hare *(Lepus variabilis)* is a very remarkable example. It is found in this country, on the high mountains of the Grampian range. Its summer dress is of a tawney grey color; but about the month of September, its fur gradually changes to a snowy whiteness. It continues in this state during the winter, and resumes its plainer covering again in the month of April or May, according to the season. The *ermine* is another of our native quadrupeds, which exhibits in its dress similar changes of color according to the season. It frequents the outskirts of woods and thickets. During the summer months, its hair is of a pale reddish brown color; in harvest it becomes clouded with pale yellow; and in the month of November, with us, it is of a snow white color. Its winter dress furnishes the valuable fur called ermine. Early in spring, the white becomes freckled with brown, and in the month of May it completely resumes its summer garb.

Among the feathered tribes such changes of color in the plumage during winter are numerous. They greatly perplex the ornithologist, and have been the means of introducing into the system several spurious species. The white grous or ptarmigan *(Tetrao Lagopus)* may be produced as a familiar example of this kind of hybernation. This bird, like the Alpine hare, inhabits the higher Grampians, and is never found at a great distance from the limits of the snow. In summer its plumage is of an ash color, mottled with small dusky spots and bars. At the approach of winter the dark colors disappear, and its feathers are then found to be pure white. In remarkably mild winters the change is sometimes incomplete, a few dusky spots of the summer dress remaining. In spring, its winter garb becomes again mottled, and the bird loses much of its beauty. Even the young birds in their autumnal dress resemble their parents in the mottled plumage, which likewise becomes white at the approach of winter.

Among the aquatic birds, similar changes in the color of the plumage have been observed. The black guillemot *(Uria Grylle)*, so common on our coasts, is of a sooty black color during the summer, with a white patch on the wings. During winter, however, the black color disappears, and its plumage is then clouded with ash-colored spots on a white ground. In the winter dress it has been described by some as a distinct species, under the name of *spotted guillemot.* In the more northern regions, as in Greenland, for example, this bird, in winter, becomes of a pure white color.

These changes of color, which we have already mentioned, extend throughout the whole plumage of the bird; but, in some instances, the change takes place on a small part only of the plumage. Thus the little auk *(Alca alle)*, during summer, has its cheeks and throat of a black color, but in winter these parts become of a dirty white. In this its winter garb, it is often shot on our coasts. Its summer dress induced *Pennant* to consider it as a variety, and as such to give a figure of it in his British Zoology. The black-headed gull *(Larus ridibundus)* has a black head during summer, as its English name intimates. During the winter, however, the black color on the head disappears; and, when in this dress, it has been regarded by many as a distinct species, under the name of the *Redlegged Gull.*

In many other birds there is a remarkable difference, in point of color, between the summer and the winter plumage, altho' not so striking as in those which we have already noticed. The colors of the summer feathers are rich and vivid; those of the winter obscure and dull. This is well illustrated in the dunlin *(Tringa Alpina)* whose summer plumage is much intermixed with black and rufous color, but whose winter plumage is dull and cinereous. In its winter dress it has been described as a distinct species, under the name of *T. cinclus*, or Purre. Similar instances might be produced in the wagtails, linnets, and plovers, and a great many other birds.

The circumstances under which these changes are observed to take place, indicate their dependence on temperature, as connected with the season. The deep colors of the summer dress are exchanged for the lighter or whiter colors of the winter, with a rapidity and extent proportional to the changes of the seasons. During a mild autumn, the shifting of the dark for the light colored dress proceeds at a very slow pace; and when the winter also continues mild, the white dress is never fully assumed. In some species, as the black guillemot, the white winter dress is never acquired in this climate, although its ash-colored plumage intimates a tendency to the change. In the climate of Greenland, on the other hand, the change is complete, and the plumage is of a snowy whiteness; as we had an opportunity of observing in the collection of the Dublin Society in 1816, in a specimen in its winter dress, brought from Greenland by an intelligent an enterprising naturalist, SIR CHARLES GIESECKE.

Having thus seen that the color of the clothing of many animals changes with the season, and that, however diversified the summer dress may be, the color during winter approaches to white, it may now be asked, What benefit is derived from this arrangement?

The rate at which bodies cool is greatly influenced by their color. The surface which reflects heat most readily, suffers it to escape but slowly by radiation. Reflection takes place most readily in objects of a white color, and from such, consequently, heat will radiate with difficulty. If we suppose two animals, the one of a black color, and the other white, placed in a higher temperature than that of their own body, the heat will enter the one that is black with the greatest rapidity, and elevate its temperature considerably above the other. These differences are observable in wearing black and light colored clothes during a hot day. When, on the other hand, these animals are placed in a situation, the temperature of which is considerably lower than their own, the black animal will give out its heat by radiation to every surrounding object colder than itself, and speedily have its temperature reduced; while the white animal will part with its heat by radiation at a much slower rate. The change of color in the dress of animals is therefore suited to regulate their temperature by the radiation or absorption of caloric.

While it is requisite that the temperature of some species should be preserved as equally as possible, the cooling effects of winter are likewise resisted by an additional quantity of heat being generated by the system. An increase in the quantity of clothing takes place to prevent that heat being dissipated by communication with the cold objects around, and the dress changes to a white color, to prevent its loss by radiation. In summer, the pernicious increase of temperature is prevented by a diminished secretion of heat or the secretion of cold, increased perspiration, the *casting* of a portion of the winter covering and by a superior intensity of color in the remainder giving it a greater radiating power. This last character would, in the sunshine, by absorbing heat, prove a source of great inconvenience, were its effects not counterbalanced by other arrangements, and by the opportunity of frequenting the refreshing shade, or bathing in the stream.

In those cases, where particular parts only of the clothing change their color, there are probably local circumstances connected with the secretions, or the sexual system, which renders such arrangements necessary. Hair growing from a part which has been wounded, is always paler colored than that which is produced on the sounder parts, intimating the operation of local causes on the coloring secretions, or local purposes to be served by the change.

It is probably for the purpose of preventing a wasteful dissipation of the heat of the system, that the dress of many animals becomes lighter colored in old age, and that the human hair turns grey. Young animals seldom present the same dress and vivid colors, &c. which they assume upon arriving at maturity.

The change of color which takes place in the dress of some animals during winter, is supposed to serve other purposes than the regulation of their temperature. The white garb which they assume, assimilates them to the color of the snow, and in this way they are considered as better able to escape the observation of their foes.

All our conclusions concerning final causes, ought to be the result of very extended observations, lest we delineate arrangements which would be productive of pain and ruin to many species, where we intended to unfold the marks of wisdom and benevolence. If the white dress of the alpine hare and ptarmigan concealed them from their enemies, the eagle, the cat, and the fox, these last by being deprived of their ordinary food, would be in danger of starvation and death. But this variation of color is not confined to weak or defenceless animals. Beasts and birds of prey are likewise subject to the change. Hence, if it yielded protection to some, it would enable others to prey with greater certainty of success on their defenceless neighbors Many of these rapacious animals, (as the ermine for example, which is at all times well qualified to provide for its wants by its determined boldness, extreme agility, and exquisite smell,) do not stand in need of such assistance. If this change extends to the rapacious as well as the defenceless, it may likewise be observed in aquatic as well as in terrestrial animals. In reference to aquatic animals we would ask, What protection is afforded to the black guillemot, during the winter, by its mottled plumage, or to the little auk, by its white chin, since the whiter their dress, so much the more unlike the dark colored water of the clouded season in which it is exhibited? The popular opinion on the subject must be relinquished as untenable; especially as the change of color from dark to white does not vary, however different the habits or even stations of the animals may be in which it takes place.

(To be continued.)

TO THE EDITOR OF THE AMERICAN FARMER.

POLITICAL ECONOMY.

ENCOURAGEMENT OF DOMESTIC MANUFACTURES.

DEAR SIR,

Should any apology to our agricultural brethren appear necessary, (which God forbid,) for addressing you on a topic of political economy, I hope to find it in the vital importance of the subject to the public weal; as well as in the peculiar interest that we agriculturists have in forming correct opinions on it, and causing them to be respected in our national councils.

To come at once to the point, my present purpose is to endeavour to call the serious attention of our friends and brethren to certain prevalent errors of a ruinous tendency both to our agriculture and commerce; which, unless something can be said or done to check such unnatural hallucinations, threaten to infect many of the very men who will suffer most from them, and whose professions (one would think) ought to protect them from such self destructive heresies. The particular circumstance which has prompted the undertaking at this time, is a very judicious, well written letter,—so far at least, as it regards the main subject,—sheep, lately published in your paper, and signed G. F. Featherstonhaugh. It contains the following remarks, which, I confess, took me nearly as much by surprise, as if I were to see a grave parson in the midst of his discourse, spring out of his pulpit, and fall to capering like a French dancing master, on his communion table:—so inapposite, out of place, and out of character for a farmer, did they appear.

"The time appears to be approaching, when this frugal and wise Government may be induced somewhat to change its policy. A constant surplus of revenue, will open a safe road *to the gradual encouragement of manufactures in wool,* and which *the increasing* wealth and skill of the country seems to call for. A moderate† aid* to manufactures would probably produce great effects. A prompt home market for wool would be created: a great impulse would be given to sheep husbandry, and to the inseparable improvements in agriculture. There would be a steady demand for the finest, as well as the coarsest wools, and the agriculturist would soon become *independent and contented* in every part of the state—wherein is comprehended every blessing that wise men desire."

Here, in less time than Mr. Featherstonhaugh could have given a crop, slit, or swallow-fork to one of his own Tups, and with full as little ceremony, three or four most important questions in constitutional and political law, are settled with a few strokes of the pen. In the first place, it is assumed as a point indisputable, that Congress may do any thing they please for manufactures, and of course, for any other branch of industry, provided they will only call it *encouragement!* and *moderate aid!* Next, it is with equal facility asserted, in a kind of genealogical way, that this encouragement, applied to woollen fabricks, would beget a "prompt home-market for wool;" this market would beget "sheep husbandry,"—sheep husbandry would beget "inseparable improvements in agriculture," and lastly and most surprising of all, this would beget "*independence* and *content*" in every part of the state: which comprehends "every blessing that wise men desire." Verily, Mr. Editor, I have seen nothing in all my little reading, like this rapid, and reciprocating procreation, unless, indeed, it can be found (I mean no irreverence) in some of the chapters of Genesis. One word as to the desires of wise men—not holding myself among that favored class, I cannot so well tell, nor even imagine every blessing that a wise man *does* desire; but I know very well what a foolish one (if you please so to call him) does *not* desire, and that is, any congressional aid in regulating either his viands or apparel. But if all the momentous matters, so briefly glanced at by Mr. Featherstonhaugh, are to be adjusted by a process at once so plain and compendious, why do our legislators mock us poor clodhoppers with the vain pretence of great caution, difficulty and delay being necessary in fixing the point of interference to which they may go, in making us eat, drink, and wear, see, smell, and hear, whatever they may fancy, both as to kind, quality and quantity? Why so much preaching before execution? It is surely an instance of wanton cruelty, little less barbarous than that of the cat, tantalizing with the mere show of liberty, the poor mouse which she designs to kill—and it is not by any thing in our constitution, but *special gratia,*—by the Royal favor of our sovereign, Congress, if in tender commiseration of our meagre purses, we are permitted to regale ourselves with a drink of cogniac grog, a mug of brown stout, or a glass of wine; to settle our stomachs with a bit of Cheshire, Double-Gloster, Stilton, or Parmesan cheese; or to indulge our bodies with shirts, coats, hats, or boots, at something between a quarter and a half, more than they need cost us, nay, so complete and uncontrollable must be this connoisance of our omnipotent masters, that even the shemises, gowns, frocks, caps, ribbands, and feathers, of our wives and daughters, are equally under their parental guardianship, and they, the said daughters and wives, might be compelled either to substitute for them, Mr. Featherstonhaugh's sheep-skins, or take Mother Eve's place for it.

Am I, for these opinions, an enemy to Domestic Manufactures? Heaven forbid. I am a friend to *every* honest kind of national industry; but let them all stand on their own bottom, and bargain with each other, or whom they please, *for* and *by* themselves. If, (as Mr. Featherstonhaugh truly says) "the wealth and skill of the country is increasing"—in God's name let them go on to do so, but let our statesmen forbear to intermeddle either with the mode or the measure any farther than to make men just and fair in their dealings This is all that a free government—unless the term *free*, means *despotic*, has a right to do. But admit for a moment this right of interference to the full extent claimed—where is the present necessity, for its exercise?

If under existing duties, the manufacturer's profits increase, (which seems to be admitted on all hands) and the farmer's profits diminish, which is equally certain, what imaginable reason *can* there be, for believing that a farther augmentation of these taxes would operate differently? would it still raise the former, and depress the latter? To maintain that it would be equally beneficial to the interest of the farmer, would be about as true in political economy, as it would be in Natural Philosophy to assert, that if a fellow trying to swim with fifty pounds tied to his heels, sinks only chin deep, fifty pounds more hung to them, would make him float breast high. But I should never come to an end, were I to enumerate all the monstrous absurdities involved in this doctrine of unlimited power in Congress, to encourage (as it is called,) any branch of domestic industry, that they chuse, at the expense of any, or of all the other branches.

Among these absurdities there can be none greater in my humble view, than the opinion that the best way to achieve independence and content, is to encourage domestic manufactures by law! By the term Independence, as Mr. Featherstonhaugh uses it, and indeed, as it is every where used in those everlasting essays on this subject, under which our news-paper editors, and all their readers have so long groaned, I understand *that state of the nation in which we shall come nearest to wanting nothing from any other nation.* Of course, if we could completely reach that point, it must be—according to the view of these gentlemen, the very consummation of all national felicity. To say nothing of the physical impossibility resulting from the nature of the planet we inhabit, which it would be necessary to overcome, before such a felicitous scheme could be accomplished—even by congressional supremacy; I would ask any man whose brain is not entirely addled by this eternal slang of national independence resulting from the national encouragement of home manufactures—which in plain English means prohibition of many foreign commodities and high taxation of all not prohibited;—I would ask him what would become of that foreign commerce which all the home market men swear by all their Gods, they have no wish nor design to destroy, if there was nothing in any country upon earth that we wanted? Nothing surely, *could there be,* if their project of making home-markets for every thing, can be realized by a congressional fiat, for which agriculture is to pay until these gentlemen cry—"enough." What too, would become of the very manufactures themselves, which they say *could, and would,* by their good wishes, be made *for exportation!* not to mention such small matters as the various products of Husbandry, such as cotton, corn, wheat, tobacco sugar, &c. which they would kindly allow us the privilege of exporting, after we had fed them at their own prices,—provided we had any left, as we probably should have, unless reduced to a state of barbarism? Would other nations want them? No, for we ought to presume that *they also,* would act upon the same cunning plan, of begetting home markets,—if it really be the perfection of political wisdom; and of course, *they* would want nothing from *us!* having acquired by the same wise contrivance, the power of supplying their own wants within themselves. The consequence of this delectable cure for the crying evil of "*an unfavorable balance of trade;*" of this millenium for all political economists of the Terrapin-Policy school, would manifestly be, that in a very short time, the commerce of the whole world would certainly and inevitably cease: for the wants of mankind considered as distinct nations, which are the sole cause of commerce, being all supplied at home—according to the independent plan: no possible motive could exist for their farther intercourse. But it may be said, that such a project could not be realized for the whole world, some nations being utterly incapacitated from supplying their own wants, and therefore that some commerce must still exist. Admit this to as great an extent as these gentlemen could venture to ask, without the most glaring contradiction of their own arguments, still, most of the pernicious consequences of their doctrine would soon follow its adoption. For they still maintain that there can be no national independence for us, but in proportion as the nation is compelled by our own government to supply our own wants within ourselves:—for this is the plain, unsophisticated meaning of all the flourishes we have seen cut about such encouragement to domestic industry, as they claim for matter of right. And yet they profess themselves friendly to foreign commerce whose very existence is dependent upon the extent to which we do *not supply* our own wants within ourselves. Not that I am against it, to any extent to which it may be carried by natural means, unconstrained by prohibitions, bounties, duties, and all the other machinery of the hot-bed policy. To talk of exporting without importing,—of selling without buying, is a palpable absurdity in fact, as well as in terms. It is the childish selfishness of eating our cake, and having it too. To attain, therefore, the kind of independence which they are so continually eulogising,—that is by executing, as well as possessing the power created by taxation on all foreign commodities, of making every thing which we consume, would be to murder foreign commerce by the very means which they insist will not injure,—if they do not actually nurture it. Nay more, such an achievement would have a constant tendency to propel us back towards that primæval state in which every man was supposed to be his own house-builder, clothier, butcher, cook, and every thing else. For nothing can be affirmed in favour of nations living independent of each other, which would not equally apply to the individuals of the same nation pursuing the same plan; nor can any thing be said in praise of the division of labour as promotive of the happiness of a single nation considered apart from the rest of the world, that would not be just as true in regard to the whole family of mankind. *Live and let live* is a maxim of such universal application, that it has no other limitation but the habitable globe. If this reasoning be correct,—and for the life of me I cannot perceive wherein it is defective; foreign commerce must be not only highly beneficial, but absolutely necessary to the happiness of the whole human race, and, a fortiori, to each different community into which it is divided. All which seems needful for its maintenance in the fullest extent of which it is susceptible, is to leave it to the influence of this natural necessity, resulting from the mutual wants of individuals and nations. Civilization itself—a blessing, (by the way,) as far more estimable than what these home-market gentlemen call *national independence*, as knowledge is better than ignorance, is the very child of its bosom; and no more able to exist without it, than man himself is, without the living principle which animates his body, and gives efficacy to his will. Indeed, the great variety of soils and climates which we find on the planet we inhabit, cannot, I think, be well explained but on the supposition that the God of all wisdom, power, and goodness, benevolently designed that the respective wants of our fellow mortals resulting from this variety, should form the indissoluble ligament of the whole human race; because the only means of continually supplying these wants, is by continual and friendly intercourse. To attempt, therefore, to diminish this intercourse by human laws, is in fact, impiously to endeavour to counteract one of the most obvious laws of the divine legislator of the universe.

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* *I was well—would be better—took phys. and—died.*

† *What, in God's name! would this gentleman call* moderate, *if he considers the present duties nothing?*

So far does this retrogressive contrivance appear to me from sound policy, that was there no middle course, I would infinitely prefer the other extreme. But thanks to our good fortune, we are not driven to any such necessity. Many of our wants we can supply on as good terms at home, as we can abroad, and some on better, without taxing either agriculture or commerce in any such way as these gentlemen are pleased to denominate *protection and encouragement to domestic industry!* So far let us go, but no further. Government, according to *our* principles and forms of it, has no more right to interfere in directing what we shall manufacture, and what we shall buy,—which they do in effect by means of duties upon foreign commodities, than they have to make us ride Mr. Featherstonhaugh's sheep, instead of horses, or commit any other enormous absurdity that could be named.

I am, Dear Sir,
Your friend and constant reader,
RURIS CONSULTUS.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

DISORDERS OF CATTLE.

October 26, 1823.

Sir,

In your paper of the 24th instant, a correspondent from Talbot, complains of a dreadful malady among cattle on two different farms—query, if it is not occasioned by over feeding on turnip tops?—I have seen similar effects produced by it—the agony of mine appeared to be great—the skin and flesh much rubbed against trees, or any thing they could get at, on each side of the head—they did not live over twenty-four or thirty-six hours

A SUBSCRIBER.

* * *

Good news for our agricultural friends.—On Wednesday last one of our merchants paid as high as 11s. per bushel for 1200 bushels of wheat, all raised by one man, and brought to this market in the canal boat Vermont, from Burlington. Thus, while the market price in the city of New-York for northern weat is 10s. 6d. the first quality from the same quarter, brings *eleven shillings* in this market. It is a fact, that the first quality of wheat does, and probably always will, command a higher price in this market, than in any other on the banks of the Hudson, for reasons which have already been mentioned in this paper, viz. the very extensive, flourishing business in which many of our capitalists are engaged.

Troy Sentinel.

* * *

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Herring Creek, Tracy's Landing Warehouse, during the quarter, commencing on the first day of July, in the year eighteen hundred and twenty-three, and ending on the first day of October, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	211			211
Number delivered.	170			170

JOHN H. TILLARD, Inspector.

Treasury Office, Annapolis, Oct. 24, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco Inspected at and delivered from Pig Point Inspection Warehouse, during the quarter, commencing on the fifth day of July, in the year of eighteen hundred and twenty-three, and ending the fifth day of October, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	176			176
Number delivered.	64			64

GASSAWAY PINDELL, Inspector.

Treasury Office, Annapolis, Oct. 21, 1823.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Piscataway Inspection Warehouse, during the quarter, commencing on the seventh day of July, in the year eighteen hundred and twenty-three, and ending on the sixth day of October in the year eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	735		1	736
Number delivered.	535			535

JOHN C. MOORE, Inspector.

Treasury Office, Annapolis, Oct. 18, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md

* * *

Great price of Tobacco.—A single hogshead of tobacco, from the plantation of Mr. Johnson, of Frederick county, Md. was sold in Georgetown, at the enormous price of *fifty dollars per hundred weight!* So much for care and attention in the cultivation of the article. Five or six hogsheads of a quality somewhat less excellent sold at an average of about *thirty dollars* per hundred weight.—*Nat. Intel.*

A FOURTH OF JULY TOAST.

DRANK IN VIRGINIA.

Why are the community so much embarrassed?

Because Banks lend money, that have not *got it to lend?*—and

Because people spend money who have not *earned it to spend.*

REMEDY.

Own the money before you lend it;
Earn the money before you spend it.

Editorial Correspondence.

Duncansville, South Carolina, October 17, 1823.

"Our crops of corn and cotton in this district are fine, and if there had not been planted in our state this year much less cotton, and more corn than the last; there would have been a very fine crop of cotton for this year. In *our* lower districts we have had less rot this year than usual. But I am informed it is much worse than hitherto in some of the upper districts. Taking all things into consideration I must conclude that the cotton crop of this year will be less than the last year's crop. The corn crop much greater than the last—much more planted, and the product from forty to fifty per cent. more than the crop of 1822.

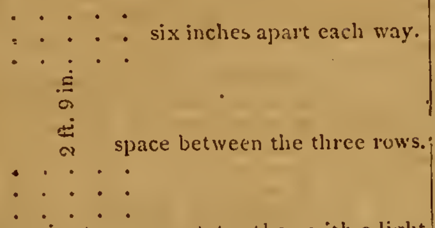
In the estimation of the cotton crop of this year the great increase of the culture of indigo has been overlooked in toto.

GREAT YIELD OF CORN—AND NOVEL MODE OF PLANTING IT.

A friend on a visit to New York, who is habitually attentive to the state of domestic industry, and the progress of public improvements—writes us as follows:

DEAR SIR,

John and Matthew Pratt of Eaton, Madison county, New York, have raised this year, 680 bushels of Indian corn, from 4 acres of land—last year they raised 517½ bushels from 5 acres; will bet $200, that within 3 years, they will raise 200 bushels from one acre—they prepare their land well, then make by a shovel plough, a trench 20 inches wide, put in their manure and cover it—2 feet 9 inches off, they make a similar trench, place their manure, and so on, through the field—they then, over the trench, drill in their corn thus:



When corn is at a proper state, they with a light plow, throw a small furrow up on each hill and hoe it in. As this exceeds all our southern ideas of corn produce, I think you will do well to write them on the subject.

New York, 30th October, 1823.

A correspondent from Queen Ann's county, Md. remarks, "that it is believed *one twentieth* of the new corn is *rotten in the field*, owing either to the excessive wet, or the chinch bug."

Baltimore, Nov. 3, 1823.

Notice is hereby given, that an application will be made to the Legislature of Maryland, at their next session, for an alteration in the law respecting hogs—extending the operation of the law to eight miles, instead of its present limits.

MR. SKINNER,

SIR—I judge from this notice, that it is desired to prevent hogs running at large, within eight miles of the city. If I mistake not, there was a trial in Talbot County, between Lloyd and Tilghman, in which it was decided, that hogs had not the privilege of going where they pleased.—The prohibition extending throughout the state.

I think you would render much service to your subscribers in this state, by procuring and publishing in your paper (even an abstract of) the law as it is, upon the subject.

It shall be done.—*Edit. Am. Far.*

* * *

A Hint to Stage Owners.—The inconvenience and misery of cold feet, while riding in stages in the winter, is obviated in the north of France, by means of pewter tanks, (made after the manner of water plates,) being fitted to the bottom of the stages, and filled with hot water at each stopping place, which impart not only warmth to the feet in the coldest weather, but a pleasant glow of heat through the whole stage, similar to that experienced in a stove room.

* * *

The following lines from the Albany Plough Boy, rival the sweetest strains of Shenstone or of Akenside. Like those writers, all Mr. Southwick's effusions breathe the same openness of heart, the same abhorrence of duplicity and exalted love of virtue.—*Rochester Telegraph.*

TO A COUNTRY GIRL,

Who expressed a wish to lead a Town Life.

BY S. SOUTHWICK.

Sweet Mary, sigh not for the town,
Where vice and folly reign—
Spurn not the humble homespun gown
That suits the rural plain.

In ev'ry street the city's glare
Doth simple hearts betray,
And simple hearts who wander there
Are sure to lose their way.

The tradesman plays his wily part,
To take the stranger in—
The profligate displays his art,
The modest maid to win—

He lures her to perdition's brink
By every treach'rous scheme,
Then leaves the hapless wretch to sink
In pleasure's guilty stream!

The flaunting crowd that seem so gay,
May please you for a while—
But joy with these doth rarely stay,
Or sweet contentment's smile.

The splendid dome that proudly rears
Its gilded roof on high,
Full oft conceals pale envy's tears
And disappointment's sigh.

There foul ambition loves to dwell,
False pride and lust of fame—
There malice and revenge rebel
Against the good man's name.

Ah! little do you know, sweet maid
What are the city spoils,
Where villains ply the canting trade,
And fraud is drest in smiles.

Then Mary sigh no more to rove,
Or change your native fields,
The rural walk, the verdant grove,
For all the city yields.

And when some swain of soul sincere,
Shall seek your love to gain,
Trust to his faith nor never fear
That you shall trust in vain.

So shall your rustic life be spent,
With every blessing crowned—
Within your doors shall sweet content
And faithful love be found.

And when your infant offspring rise,
A mother's smile to greet,
The joy that sparkles in their eyes,
Shall your own bliss complete!

Your tide of life, thus even flowing
Will ebb at last, 'tis true—
When calm with hope your bosom glowing
You'll bid the world adieu!

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 7, 1823.

☞ A brief sketch of the Cattle Show will be given in our next number, and the reports at large as soon as we receive them. In the mean time it will be gratifying to our readers to know, that the exhibition of the first day, has been much better, and more satisfactory, than could have been expected, considering the very unfavorable state of the weather. All unite in opinion as to the beneficial effects of such exhibitions, and measures are in progress, to secure their extension and continuance.—We have no doubt that we shall have soon another and a welcome opportunity of witnessing a beautiful and *well regulated exhibition* on the Eastern Shore of Maryland.

☞ Since writing the above the Agricultural Exhibition has closed. Though the weather continued very unfavourable, the assemblage on the Second Day was very numerous and highly respectable; and the cheerfulness and good spirit with which all the various duties of the Committees were performed, and the whole proceedings of this day conducted, may be considered as highly propitious to the best views and hopes of the Society.

The Ploughing Matches were exceedingly well arranged and attracted great attention; eight ploughs moved simultaneously for the prizes—and all performed admirably. The victors, whoever they may prove to have been, may esteem their honours the more for having beaten such worthy competitors.

The inclemency of the day, and the delicate state of his health, deprived the Society of the pleasure of hearing an address, which had been prepared by Gen. Harper: whereupon it was Resolved, to request a copy of it for publication in the American Farmer.

After the premiums were delivered, the Society dined together in great harmony, and with an evident manifestation of augmented zeal and resolution to persevere in the objects of their Association.

The proceedings of the day closed with the sale at public auction of a variety of valuable domestic animals.

Alderney Cow and Calf

FOR SALE.

In consequence of her owner being desirous to attend *exclusively* to another selected breed of cattle, he will sell a full blood imported Alderney cow, six years old; which is thought to be at least equal, if not superior to any other of the breed in America.—She is of a large size, and so exceedingly good tempered, that any child can milk her—and the superior quality of her milk fully justifies the highest encomiums on record upon that subject; her calf is a female of three weeks old, and was got by a full bred Devon bull, which cross is represented in the English prints, as being superior to any other.

For further particulars apply to the Editor,

Baltimore, Nov. 6th, 1823.

The above cow is well known to the Editor, who has often seen her milked, and bought one of her calves which he sold to Commodore Chauncey.—She is decidedly the finest cow of that breed he has ever seen, and would be a rich *prize* to the owner of a *butter* dairy.

Edit. Am. Far.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

REPORTS

Of the Committees of the Massachusetts Agricultural Society, as to the premiums awarded at the Cattle Show and exhibition of Manufactures, held at Brighton, on Wednesday and Thursday, the 15th and 16th of October, 1823.

[*Continued from No.* 33, *page* 259.]

PLOUGHING WITH OXEN.—No. V.

The committee appointed to award premiums on the Ploughing by single teams, or one yoke of oxen, have attended to the duty assigned them, and report as follows, viz:—That nine persons entered as competitors, and drew from the eleven lots laid out by the committee of arrangements, as follows:

No. 9. Joseph Dudley, of Sutton, himself ploughman, ——— —, driver. Work performed in 26 minutes, 12 furrows turned.

No. 10 Lincoln Fearing, of Boston, E. Cushing ploughman, Giles Woodman driver. Work performed in 29½ minutes; 10 furrows turned.

No. 11. Silas Dudley, of Sutton, himself ploughman, Isaac Hathawey driver. Work performed in 31 minutes; 13 furrows turned.

No. 12. Leonard Stone, of Watertown, Solomon Sargent ploughman, Jonas Smith driver Work performed in 28½ minutes; 13 furrows turned.

No. 13. Isaac Cook, of Brookline, Isaac Cook, Jr. ploughman, Isaac Cook, Jr. driver. Work performed in 35 minutes; 13 furrows turned.

No. 14. Stephen Marsh, of Sutton, Simeon Phelphs ploughman, Stephen Marsh driver.—Work performed in 27 minutes; 12 furrows turned.

No. 15. Aaron Davis Williams, of Roxbury, Lewis Barker ploughman, Lewis Bliss driver.—Work performed in 32½ minutes; 14 furrows turned.

No. 16. Joseph Miles, of Concord, Silas Lee ploughman, Joseph Miles driver. Work performed in 25 minutes; 11 furrows turned.

Your committee feel it a duty to report, that all the work was well performed, and did great credit to the performers; but having only three premiums to bestow, after due deliberation, having examined the work carefully, award as follows:

To; Isaac Cook, of Brookline, the first premium	$15
Isaac Cook, Jr. as Ploughman,	8
Isaac Cook, Jr. having no driver,	4
	$27
To Aaron Davis Williams, of Roxbury, the second premium,	$10
Lewis Barber, Ploughman,	5
Lewis Bliss, Driver,	3
	$18
To Silas Dudley, of Sutton, the third premium,	$6
Do. as Ploughman,	3
Isaac Hathaway, Driver,	2
	$11

The committee found some difficulty in awarding the premiums, and regretted that they had not at least one more to bestow, but have endeavored to award in the best manner the nature of the subject would permit All which is respectfully submitted.

(Signed) GORHAM PARSONS,
Chairman,
ICHABOD NICHOLS,
FRANCIS WINSHIP.

Brighton, October 16, 1823.

REPORT, NO. VI.

The committee on the ploughing match of *two pair* of oxen to plough one quarter of an acre, consisting of John Prince as chairman, and Josiah Titcomb and Paul Upton, beg leave to report their opinion and award of premiums:

That four ploughs only were entered to contend for the three premiums, that the plough men drew for lots as follows:

No. 1. John Sherman, of Sutton, with plough and wheel on the end of the bean, made by J. Hall of Sutton—said Sherman himself ploughman, and Austin Sherman, driver.

No. 2. Stedman Williams, of Roxbury, plough made by Jesse Warren, of Dedham, with wheel on the bean—said Williams ploughman, and Samuel Prime, driver.

No. 3. Joseph Curtis, of Roxbury, plough made by Jesse Warren, of Dedham, with wheel and cutter—Amos Wyman ploughman, and Aaron Stone driver.

No. 4. Aaron Davis Williams, of Roxbury, plough made by Jesse Warren, of Dedham, with wheel and cutter—Thomas Howe ploughman, and David Howe, driver.

The rules and regulations were explicity stated to the ploughman, particularly that *goodness of work*, the *state* of the cattle when finished, and *time* would be taken as criterions in deciding the premiums, and that the committee did not wish the cattle to be *hurried*, as good work could not be well done, when over driven. They have great satisfaction in stating that the work was all exceedingly well performed, and the cattle came out in good order, and could all of them with ease, have proceeded to do double the work if required. The only difficulty the committee experience is in deciding, and they trust from the pains they took, that the unsuccessful competitor will not feel dissatisfied, although he was the only one that could not obtain a premium, they much wish they had a fourth to give him.

No. 1 finished their task in 48 minutes 20 seconds, with 28 furrows in 24 feet width, making 10 1-3 inches per furrow—the cattle 3 and 4 years old.

No. 2 finished in 44 minutes 20 seconds, with 26 furrows in 24 feet, making 11 inches per furrow—cattle 3 and 8 years old.

No. 3 finished in 49 minutes 30 seconds, with 26 furrows in 24 feet making 11 inches per furrow—cattle 7 and 8 years old.

No. 4 finished in 49 minutes, with 28 furrows in 24 feet, making 10 1-3 inches per furrow—cattle 6 years old.

The chairman having stated his wish to the committee that they should agree on the premiums, if not he would be called to the unpleasant task of deciding—which he is happy to inform the Trustees he was not required to do—the committee agreeing in opinion to award as follows:

The first premium to Stedman Williams—plough	$15
Himself ploughman	8
Samuel Prime, driver	4
	$27
2d prem.—John Sherman—plough	$10
Himself ploughman	5
Austin Sherman, driver	3
	$18
3d prem.—Aaron D. Williams—plough	$6
Thomas Howe, ploughman	3
David Howe, driver	2
	$11

They feel themselves in duty bound to state, that the goodness and well training of the 3 and 4 years old cattle of Mr. Shermar. would have given him a fair claim for the first premium, had he not made two or three baulks in his work.—They would also state, that the work of Mr. Curtis's plough was very fine, but rather shallower than their rule, or any other plough.

The committee feel satisfied that all engaged exerted themselves to the utmost, in doing good work, and they only regret, that there had not been more competitors, that they should not have had the unpleasant feelings of leaving a solitary, faithful and deserving one.

(Signed)
JOHN PRINCE,
JOSIAH TITCOMB,
PAUL UPTON.

Brighton, Oct. 16, 1823.

ADVICE TO YOUNG FARMERS.

ON THE APPELLATIVES, QUALITIES, HABITS, AND DEFECTS OF HORSES.

Continued from No. 32, *page* 250.

I shall begin with generals, proceeding to particulars, as they present themselves to my recollection; but rather studying comprehension and use, than the graces of method and arrangement.

Time, which is contiuually changing all things has, in course, induced various alterations in the nomenclature of the stable. Horses, for the different purposes of the saddle, were in former days, termed *nags*, *amblers*, *pacers*, *stirrers*, *trotting horses*, *hobbies*, *great horses*, or horses for the *buff saddle* (for war) *hunting-horses*, *coursers*, *race-horses*.

The appellatives, whether synonymous or distinctive, in present equestrian use among us, are *road-horses*, *riding-horses*, *saddle-horses*, *nags*, *chapmens horses*, *hacks*, *hackneys*, *ladies horses*, *or pads*, *hunters*, *running horses*, *racers*, *race-horses*, *gallopers*, *welter-horses*, *managed horses*, *chargers*, *troop-horses*, *post-hacks*, *or post-horses*, *trotters*, *cantering hacks*, *or canterers*, horses which *carry double*, *cobs*, *galloways*, *ponies*, and *mountain-merlins*.

Chapmens horses, or common road-hacks, are of the strong and serviceable kind, having little or no racing-blood, and calculated for those services, in which much speed is not required. *Hack* or *hackney*, is the general term for a road-horse, and by no means conveys any sense of inferiority, or refers exclusively to horses let out for hire. By trotters, we do not understand now, as formerly, horses which have been merely accustomed to that pace, but such as excel at it, in respect of speed; a similar observation holds, respecting canterers, but it usually refers to their powers of continuance. Gallopers mean race-horses.—Welter horses, are gallopers qualified by their strength for the Welter stakes, weight thirteen stone. The terms galloway and poney, refer solely to height. All under thirteen hands, are denominated ponies; from that height to thirteen three, they are called galloways; at fourteen hands they are deemed sized horses. Of foals, the male is called a colt-foal, the female a filly-foal, yearlings, two-year-old, &c. Cobs, cloddy, round-buttocked, fixed horses about, or not much above the galloway size. Of the Mountain Merlin, I have not heard of late years, nor could ever obtain any definition.

In the techibal phraseology appropriated to this subject, a *bred* horse is understood to be one of the pure racing, or Oriental blood; the degrees of its commixture with the common blood, or breed, of this country, are signified by the terms, three-parts bred, half-bred, blood-horses, or having a shew of blood.

The characteristic signs of blood, are fineness of skin and hair, symmetry, and regularity of proportions; length, flatness, and depth, particularly in the shoulder and girting-place; swell of the muscles, and shew of substance in the fore-arms and thighs; leanness and symmetry of the head; large and bright eyes; pasterns somewhat longer, and more inclining than common, and deer-like hoofs. Of these a horse will generally partake, in proportion to his degree of blood.

Since we acquire symmetry, ease of motion, speed and continuance, in proportion to the racing blood our hacknies and hunters possess, it may be demanded, why not make use exclusively of full-bred horses? Osmer has spoken decidedly in their favour. I have heard it affirmed by a sportsman, that there is the same difference of motion between a racer and a common bred horse, as between a coach and a cart. It is moreover a fact, although it does not lie upon the surface, that no other horses are capable of carrying, with expedition, such heavy weights; and were a thirty stone plate to be given, and the distance made fifty miles, it would be everlastingly won by a thorough-bred horse. There is only one way in which a bred horse would be beat at high weights. It would be (to use a queer phrase) by making it a stand-still race; in that case, I would back a cart-horse, I think he would beat a racer by hours. Thorough-bred hacks are the most docile and quiet, and the least liable to shy of all others; they also sweat less on a journey.

He who possesses a thorough bred hack or hunter, sufficiently short-legged, lively, and active; which bends its knees, and goes well above the ground, and has sound tough feet; has perhaps obtained every qualification he can wish, for the road, except trotting; which he must never expect, in any extraordinary degree, in a bred horse. But horses of such a description are not common, because unfit for the turf; and nobody, as yet, has bred racers expressly for other purposes. The disadvantage of bred cattle, for the road or field, are too great delicacy, rendering them susceptible of harm, from wet and cold; tenderness of legs and feet; too great length of leg and thigh, and pliability of sinew, which gives a more extensive compass to their strokes, than is convenient to the common business of riding, or even of hunting; their stride also, natural sluggishness, and tender feet, occasion them to be unsafe goers.

Which then is the most proper species for the road? or rather (since it is agreed that blood is absolutely necessary) how much ought a hackney to have? I believe he ought either to be three parts bred, as much as to say, one got by a racer, out of a half bred mare, or *vice versa*, or one which is produced from good-shaped hackney stock on both sides, both sire and dam having some blood. I incline to the latter. In these mediums you may secure sufficient delicacy, symmetry, speed, and continuance, without any of the disadvantages attendant upon full blood.—The produce of three parts bred mares and race-horses, which might be called seven-eighths bred, if we wanted a new term, have too generally all the disadvantages of the latter, without the benefit of their peculiar qualifications.

The ancient prejudice of the superior fitness of the land of one English county above another, for the production of saddle-horses, and the supposed pre eminence of Yorkshire, Northumberland and Durham, has been of late years fully and completely exposed. The Isle of Ely, Norfolk, and Suffolk, have for some years past, bred the best hacks, and the fastest trotters in England. It follows not however, from thence, that equally good stock may not be bred in any of the other counties, provided they have as good stallions and mares, and pursue the business with as much industry. I was laughed at on all sides, some years ago, for referring the whole matter to custom, plenty of land, and convenience; and for asserting, that horse-breeding might be carried on elsewhere, with equal or even superior advantages to those experienced in Yorkshire.—The influence of custom over the human mind is truly wonderful, and beyond all doubt the real cause of the tardy progress of improvement.—An old farmer, was making bitter complaints of the high price of cart-horses, and the heavy tax it laid upon husbandry. I asked him why he did not breed his own horses, since they paid so well. "Aye, aye," said he "but you know this is not a breeding county." The good man rented fifteen hundred acres of land, full half of which was fit for little else but pasturing of cattle.

Even Mr. Marshall, before quoted, although he has made many very judicious observations, relative to horses, has not been, or rather was not, at the time of writing his rural œconomy of Yorkshire, able to steer clear of the contagious influence of established prejudice: doubtless because it related to a subject, upon which he had not bestowed a thorough examination. He observes; "In Norfolk, the breeding of saddle-horses has been repeatedly attempted without success. Yorkshire stallions have been, and still are, sent into Norfolk, in the covering season.—The *foals* may be handsome, but they lose their form as they grow up. On the contrary, in Yorkshire, let the foal which is dropped be ever so unpromising, it will, if any true blood circulate in its veins, acquire fashion, strength, and activity, with its growth." He seems to refer these advantages to "the influence of climature on the constitution;" and adds, that no man has yet been able to breed Arabian horses in England; English horses in France, or Germany; nor Yorkshire horses in any other district of England. Only the general principle of this reasoning appears to be just; the application is totally erroneous. There can exist no doubt of the favourable influence of genial climature, and rich pasturage. But it remains to be proved, that Yorkshire has ever excelled all other parts of England, either in those respects, or in the superior quality of their horses; the reverse, however, at this time, needs no proof. In the number of horses bred, there can be no doubt of the superiority of Yorkshire, but it appears to me, that the proportion of bad ones, has been full as large in that as in any other county. The Yorkshire bred horses have long and often been remarked, for their heavy heads, round, gummy legs, and general want of symmetry. These defects were ever visible enough, in many of the long, heavy, lumbering, half-bred stallions of that county. It is highly probable, that the ill success with which, according to Mr. Marshall's account, the early attempts of the Norfolk breeders was attended, may have been occasioned, among other disadvantages to which new undertakings are ever liable, by the very circumstance of their introducing Yorkshire stock.—Their own native stock was in all respects preferable; from which, assisted by the racing breed, they with their neighbour county Suffolk, have supplied the metropolis of late years with saddle-horses of superior form and estimation to those of Yorkshire.

The reasonings of this excellent author, owing merely to the cause already hinted, are not a whit more conclusive, on the subject of race-horses; of which more in its place.

St. Bel, also, asks very gravely for a solution of the difficulty, why Suffolk has a peculiar breed of horses, and why they cannot be bred elsewhere? Experience teaches there is no difficulty at all in the case. Any other county having made choice of, and set off originally with that peculiar species (there lies the jet of the business, I believe) would have all along produced much such another breed, varying in a trifling degree, from local circumstances. I know of no county in England, in which I would not pledge myself to produce a race of Suffolk horses, so original in all respects, as to defy the penetration of the best jockies of that county.—But it must be effected by a more perfect method, than that which I have known practised by persons resident in some of those, which are said not to be breeding counties. They have been desirous of breeding the large black cart horses, but after repeated trials, have relinquished it, from an alleged impossibility of bringing them up to the required size; and yet their grass land has been equal, or superior in goodness, to that of the native soil of these famous cattle.—On enquiry, I always found, that they indeed sent their mare to a thorough-bred horse of the species in request, but that she herself was sure to be one of the common stock of their own county. I have known more than one person attempt to breed racers upon the same plan, and with equal success.

Major Jardine, in his entertaining and instructive letters from Barbary, Spain, &c. observes, very justly, that the world seems to be divided, for men, as well as cattle, into breeding and feeding countries; the determinations however, to either, I think usually depend upon accidental circumstances.

The natural superiority of one English county over another, as to the point in question, has always been over-rated. Some local distinctions, no doubt, must exist; for instance, the hardy mountaineers of Wales and Scotland excel in strength of constitution, ability to carry weight, and toughness of feet; but are deficient in size, figure, and speed.

I have observed, upon the little attention, merited by the colour of horses, with reference to their good or bad qualities. In some respects, it may interest nice and curious people, who are more solicitous about external appearance, than great and useful qualifications. Thus, greys and browns, spot and stain very much, with the dirt and sweat, and are made dry and clean with great difficulty; the stains remaining longer upon them, than on other colours. Light greys, nutmeg-coloured horses, and red roans, if well-bred, perhaps exhibit that symmetry to the best advantage, which is the concomitant of high-racing blood. The latter never fail to remind sportsmen of the old school, of the famous Sedbury, said to have been the justest proportioned horse ever bred in England; on this head an exception must be made, in respect to the legs and hoofs of horses, which constant experience has shewn to be best, when of a dark colour.

For their temperaments, both mental and corporeal, the strictest analogy may be found in the human species. We observe among horses, the hot, irritable, and weak; the cold, phlegmatic, slow, and durable; with all the various intermediate gradations. It can be only by way of refreshing the memory of his readers, when an author presumes to counsel them, to make choice of a medium.

Hot horses are generally speedy and safe goers, pleasant to ride, the best flying leapers, and their legs stand clean and dry, in the stable; but short and easy tasks, of all kinds, suit them best; they are unfit to carry heavy weights, and if they feed well when they play, they are sure to lose their appetite in work. It must be noted, nevertheless, that there is a species of this genus, which may be styled, *resolute horses*; these, notwithstanding their heat and choler, will endure to the very last, and in the hands of those who have skill and ability sufficient to manage them, will beat all other horses. Of this species, precisely, was the celebrated Eclipse.

It is only ringing the changes, to particularize the incidental qualities of the cold, phlegmatic, and dull; they are, among a variety of disorders, particularly liable to swelled legs, grease, and diseases of the eyes, besides being slow, and liable to fall. There is still a variety, partaking of the phlegm, and, in some degree, of the inconveniences of the last-mentioned, which have strong constitutions, feed well, and are fit for a long day, and constant work, whose want of speed is compensated by their powers of duration; in a word, stout horses. Of the extremes; the slow, and stout horse, is certainly of more value than the hot, uncertain and speedy one, in all situations, but upon the turf.

The tempers of horses, like those of their masters, are various, endowed with a greater or less proportion of intelligence, sagacity, and feeling; and it is but too often, the beast evinces the greater degree of rationality.—Their dispositions admit, conveniently enough, of the following classification; the docile and generous, the stupid and unnoticing, and the perverse and rebellious.' In all these, the more they are treated with reason, temper, and compassion, the more they conduce to the ease, the profit, and contentment of man; and this, I am convinced by experience, will be acknowledged by none more readily than by those, who, having been accustomed to the contrary, will vouchsafe to make fair trial of such methods As to the first, or the docile and generous, it is inconceivable to those who have not made the pleasing essay, to what a degree of perfection their faculties may be brought, by rational and conciliating usage. In a very short time, correction becomes perfectly useless, and the whip and spur, the mere harmless instruments of your direction.—The sound of his master's voice is at once loved, feared, and obeyed, by a generous, and well-managed horse. Instead of a reluctant and treacherous slave, you have obtained an humble, and faithful friend, a willing sharer in your toils, and in your pleasures; even an agreeable companion, who, although he cannot converse, understands you well; who takes every hint, every indication, from your hand or voice, in an instant; and plainly shews a pride and pleasure in obedience, whether it be to constrain himself for your ease, or to lay out the whole of his powers, even unto death, for your service. While such advantages are practicable, through the easy and pleasing means of humanity, who would take the pains to be a tyrant?

It is well known that some horses, although rather ill-natured to their own species, for which it is difficult to assign a reason, are exceedingly attached to the human, and will play with their keepers, with as much apparent delight, as spaniels; but horse-play is proverbially dangerous, and I have thence witnessed several fatal accidents.

The second class, or the stupid and unnoticing, it is obvious, can never be mended by harsh and cruel usage. It can only serve to increase the natural torpor of their disposition, and render their bodies insensible and callous; in fact, to lessen their use, and increase their owner's trouble. A post-boy would say to me, "Ah, master, your fine reasons would never bring my horses through their stage." These practical sages are, however, not always right. It seems to me, at least plausible, that if they did not deaden their horses feelings, by a premature, and too free use of the whip and spur, they would save their arms and legs much labour, and their masters a great deal of horse-flesh.

The perverse and rebellious, or vicious horses, are of two kinds, those which are so from natural predisposition, and such as are rendered restiff, or vicious, from insufficient breaking, or acquired habits. The first is ever a lost case, whatever the most skilful *domitor equorum* may pretend to the contrary; and in the second, the cure is but uncertain at best, which will be allowed by all those who have considered the mighty power of habit, even among us two-legged animals, who vaunt so highly of the strength of our reasoning faculties. The disciples of Locke will deny the existence of innate qualities, such as I have supposed. They should, I think, furnish some new hypothesis, on which to account for the following facts, the truth of which will be allowed by all who have had much experience in horses. Two colts, of like age, shall be broke at the same time, by persons of equal skill, or by the same person. They shall be treated precisely in the same manner, in all respects; and yet the one shall be tamed to obedience, with only the common difficulties, and remain perfectly quiet; whilst the other, even if rendered somewhat tame at first, shall always obey with reluctance, and continue self-willed and restiff, all his life. Restiveness, and various other qualities, bad or good, are also known to be sometimes hereditary, and to run through many generations. Do not these natural tendencies, (granting their existence) either in man, or beast, arise from the accidental variation of specific quantity in the elements which compose the animal mass, or compound; from its peculiar structure, and organization?

It is impossible, by any mode of calculation, which includes the probable risks, to attach the value of a single penny to the living carcase of a determined restiff, or vicious horse; and it is the interest of every unfortunate proprietor of such an one, to knock him on the head, in preference to being obliged to keep and use him.—The conquest gained over his will, is always temporary and uncertain; in a single moment, more than the worth of his whole life of service is kicked down, and perhaps some melancholy accident induced. Many dashing young blades, I know, are fond of exhibiting their prowess, and their skill, upon these intractable animals; but I really think it a pity, that such as have any brains to lose, should risk a fracture, in so uninteresting and contemptible a business. In these cases, chance often throws them into situations, in which neither their strength, nor courage, can be of much use to them. The last accident of this sort, I particularly noticed, happened to a man, who had both his thighs broken, by his horse taking it into his head, to go down with him into the area of a house, near Leicester Fields.

(To be continued.)

NATURAL HISTORY. No. 4.

[*Continued from page* 262.]

An interesting inquiry yet remains to be made regarding the manner in which this change in the color of the dress is effected. The attention of naturalists has, of late years, been directed to this subject, and several important observations have been made, equally interesting to the physiological and systematical zoologist.

From the belief which is generally entertained, that in hair and feathers there is no circulation, neither secretion nor absorption, a conviction arose in the minds of many naturalists, that the change of colour which takes place in the dress of some animals according to the season, was not the effect of any organical change in the hair or feathers, but accompanied a renewal of the whole. The late GEORGE MONTAGU, Esquire, who had long attended to the characters and habits of the feathered tribes, delivers his opinion on this subject in the following terms: "Some species of birds seem to change their winter and summer feathers, or at least in part; in some, this is performed by moulting twice a year, as in the ptarmigan, in others, only additional feathers are thrown out. But we have no conception of the feathers changing colour, although we have been informed of such happening in the course of one night." Staggered with the statements of such a frequent renewal of the dress of animals, accompanied by such a wasteful expenditure of vital energy, and guided by multiplied observations, we ventured to offer the following remarks on the subject in the Edinburgh Encyclopedia, under the article "Hybernation," vol. xi. p. 387, published in 1817.

"It has been supposed by some, that those quadrupeds which, like the alpine hare and ermine, become white in winter, cast their hair twice in the course of the year; at harvest when they part with their summer dress, and in spring when they throw off their winter fur. This opinion does not appear to be supported by any direct observations, nor is countenanced by any analogical reasonings. If we attend to the mode in which the hair on the human head becomes grey as we advance in years, it will not be difficult to perceive that the change is not produced by the growth of new hair of a white colour, but by a change in the colour of the old hair. Hence there will be found some hairs pale towards the middle, and white towards the extremity, while the base is of a dark colour. Now, in ordinary cases, the hair of the human head, unlike that of several of the inferior animals, is always dark at the base, and still continues so during the change to grey; hence we are disposed to conclude from analogy, that the change of colour, in those animals which become white in winter, is effected, not by a renewal of the hair, but by a change in the colour of the secretions of the rete mucosum, by which the hair is nourished, or perhaps by that secretion of the colouring matter being diminished, or totally suspended.

"But as analogy is a dangerous instrument of investigation in those departments of knowledge which ultimately rest on experiment or observation, so we are not disposed to lay much stress on the preceding argument which it has furnished. The appearances exhibited by a specimen of the ermine now before us are more satisfactory and convincing. It was shot on the 9th May, (1814,) in a garb intermediate between its winter and summer dress. In the belly, and all the under parts, the white colour had nearly disappeared, in exchange for the primrose-yellow, the ordinary tinge of these parts in summer.—The upper parts had not fully acquired their ordinary summer colour, which is a deep yellowish brown. There were still several white spots, and not a few with a tinge of yellow. Upon examining those white and yellow spots, not a trace of interspersed new short brown hair could be decerned. This would certainly not have been the case if the change of colour is effected by a change of fur. Besides, while some parts of the fur on the back had acquired their proper colour, even in those parts numerous hairs could be observed of a wax yellow, and in all the intermediate stages from yellowish-brown, through yellow, to white.

"These observations leave little room to doubt, that the change of colour takes place in the old hair, and that the change from white to brown passes through yellow. If this conclusion is not admitted, then we must suppose that this animal casts its hair at least seven times in the year. In spring, it must produce primrose-yellow hair; then hair of a wax-yellow; and, lastly, of a yellowish brown. The same process must be gone through in autumn, only reversed, and with the addition of a suit of white. The absurdity of this supposition is too apparent to be farther exposed.

"With respect to the opinion which we have advanced, it seems to be attended with few difficulties. We urge not in support of it, the accounts which have been published of the human hair changing its colour during the course of a single night; but we think the particular observations on the ermine warrant us in believing, that the change of colour in the alpine hair is effected by a similar process. But how is the change accomplished in birds?

"The young ptarmigans are mottled in their first plumage similar to their parents. They become white in winter, and again mottled in spring. These young birds, provided the change of color is effected by moulting, must produce three different coverings of feathers in the course of ten months. This is a waste of vital energy, which we do not suppose any bird in its wild state capable of sustaining; as moulting is the most debilitating process which they undergo.—In other birds of full age, two moultings must be necessary. In these changes, the range of color is from blackish grey through grey to white, an arrangement so nearly resembling that which prevails in the ermine, that we are disposed to consider the change of colour to take place in the old feathers, and not by the growth of new plumage; this change of colour being independent of the ordinary annual moultings of the birds.

"Independent of the support from analogy which the ermine furnishes, we may observe, that the colours of other parts of a bird vary according to the season. This is frequently observable in the feet, legs, and bill. Now, since a change takes place in the colouring secretions of these organs, what prevents us from supposing that similar changes take place in the feathers? But even in the case of birds, we have before us an example as convincing as the ermine already mentioned. It is a specimen of the little auk *(Alca alle,)* which was shot in Zetland in the end of February 1810. The chin is still in its winter dress of white, but the feathers on the lower part of the throat have assumed a dusky hue. Both the shafts and webs have become of a blackish grey colour at the base and in the centre, while the extremities of both still continue white. The change from black to white is here effected by passing through grey. If we suppose that in this bird the changes of the color of the plumage are accomplished by moulting, or a change of feathers, we must admit the existence of three such moultings in the course of the year—one by which the white winter dress is produced, another for the dusty spring dress, and a third for the black garb of summer. It is surely unnecessary to point out any other examples in support of our opinion on this subject. We have followed nature, and our conclusions appear to be justified by the appearances which we have described."

Since the preceding observations were communicated to the public, Professor JAMESON has obligingly pointed out to me the following passage in CARTWRIGHT's Journal of Transactions on the Coast of Labrador (3 vols. 4to. Newark 1792,) vol. i. p. 278, as containing an expression of the same opinion which I had formed upon the subject "28th September 1773.—This morning I took a walk upon the hills to the westward, and killed seven brace of grouse.—These birds are exactly the same with those of the same name in Europe, save only in the color of their feathers, which are speckled with white in summer, and perfectly white in winter, fourteen black ones in the tail excepted, which always remain the same. When I was in England, Mr. BANKS (now Sir JOSEPH BANKS,) Doctor SOLANDER, and several other naturalists, having inquired of me respecting the manner of these birds changing colour, I took particular notice of those I killed, and can aver for a fact, that they get at this time of the year a very large addition of feathers, all of which are white; and that the coloured feathers at the same time change to white. In spring, most of the white feathers drop off, and are succeeded by coloured ones; or, I rather believe, all the white ones drop off, and that they get an entire new set. At the two seasons they change very differently; in the spring, beginning at the neck, and spreading from thence; now, they begin on the belly, and end at the neck. There are also ptarmigans in this country, which are in all respects the same as those I have killed on some high mountains in Scotland."

The total absence of every thing like demonstration of the truth of the assertion regarding the autumnal change of the colour of the plumage of the grouse, and the language of hesitation which he employed when speaking of the changes observed to take place in spring, probably induced those naturalists who had perused CARTWRIGHT's work, to reject statements so opposite to the opinions generally entertained on the subject. The conjecture that all the white feathers drop off in spring, even those which were produced in the previous autumn, to be succeeded by coloured ones, has not been verified by any observations which we have been able to make on the subject.

The moulting of birds takes place in all cases gradually, and in those species whose plumage changes colour with the season, the different moultings take place at corresponding periods. In the autumn, we find that the black feathers on the head of the *Larus ridibundus* change to a white colour. But besides the altered feathers, others spring up, of a white colour, to increase the quantity of clothing. This gull has, therefore, during the winter, some of the feathers of the head old, and others young. Again, in spring the white feathers of the winter become black, and a few new feathers make their appearance, likewise of a black colour, to supply the place of the older ones which drop off in succession. Some of the feathers on the head of this gull are half a year older than others; and consequently, we may infer, will fall off sooner than those of more recent growth. From these, and similar facts, furnished by several species of British birds, we are disposed to conclude, that the feathers which are produced in autumn and the beginning of winter, and which correspond with the conditions of the season, change their colour in spring, and continue in this state until they are shed in autumn. The feathers which are produced in spring, continue of the same hue during the summer, change their colour in winter, and fall off again upon the approach of spring. In this manner, the quantity of the plumage fit for the different seasons of the year is easily regulated, and it is only necessary that the change of colour in each feather should take place but once in the course of its connexion with the bird. By these arrangements, the welfare of the individual is promoted by the simplest means.

Many animals, which are unable to provide against the vicissitudes of the seasons, by varying the quantity and the colour of their dress, are, nevertheless, protected by being able to shift their quarters, so as to live throughout the whole year in a temperature congenial to their constitution.

(To be continued.)

EXTRACTS

FROM MORE MODERN WRITERS ON THE USE OF SALT IN AGRICULTURE.—No. III.

From a Pamphlet entitled "Hints to Country Gentlemen and Farmers, on the importance of using Salt as a general Manure." By the late J. Hollinshead, Esq. of Chorley. Third edition, 1802.

[*Continued from page* 261.]

"The only manure that can be procured in all places is dung (lime and marl being entirely local, and confined to certain districts,) and how insufficient it is to answer all the purposes of husbandry, need not here be insisted upon, since it must be plain to the most superficial observer. Let us turn our eyes for a moment to the generality of breeding and grazing farms, and see in what state they are. The dung that can be raised from the produce of the farm is all expended upon a few acres of meadow-land, whilst the pasture-grounds are destitute of every kind of improvement. This is no idle speculation; for which way soever we turn our observation, we shall find abundant proofs of the truth of the assertion—thousands and ten thousands of acres lying in the same state, with regard to any actual improvement that has been made in them in which they came out of the Creator's hands, and must inevitably remain so, unless some other manures are introduced into practice, besides those which are now in use."

"What a misfortune to the dairy must this neglect of the pasture grounds be! and this too is the ground upon which the occupier must principally rely; for it is well known, that during the summer months, whilst his cows are at grass, is the time in which he chiefly produces his butter and cheese; and yet this ground is entirely neglected. Whilst the demand for those articles is daily increasing, we are indifferent whether their productiveness be proportioned to that demand; by which inattention the price of those commodities has, in a few years, been doubled. And what shall bring them to their former price? *Manure these pastures with salt.* By this means we shall increase their produce two-fold, and consequently decrease the price of those necessaries of life nearly in an equal proportion. This would be an unspeakable advantage and comfort to the labouring poor, at the same time that it was enriching both the farmer and land-owner.

"I know some will say that there are many soils which cannot be improved. I deny the assertion. Let but the farmer be properly encouraged to make the trial, and I am convinced he will not find his labour lost. If our ancestors had always been indifferent to agricultural improvements, what must have been our situation at the present day? We might have lived upon the haws and berries of the field; for nature has not been so lavish in her gifts to this country as to some others: few of the necessaries of life will thrive and flourish without the most unremitting industry. *By nature our apples are crabs, and our plums sloes!* but art and nature have changed the scene: and health-giving exercise, properly directed, and duly encouraged, would bring the kingdom to an unexampled pitch of plenty and splendour.

"The proper cultivation of the soil is an object so peculiarly interesting to the community at large, that those who industriously attend to it are perhaps to be esteemed the most meritorious citizens of their country.

"Of such importance are the study and practice of agriculture in Scotland, that they have instituted a professorship in one of their universities; and it is much to be lamented, that a similar institution is not introduced into our universities, as it would essentially tend to the promotion of this most important department of knowledge, so highly beneficial to mankind."

"It is proved by the general returns of the number of inhabitants in *England* and *Wales*, that there has been an increase of two millions (or nearly one-fourth of the whole) during the last century. Then, as population and manufactures are rapidly increasing, is it not of the utmost consequence that we should have a proportionate increase in the productions of the earth?

"With proper encouragement to and management in agriculture, I have no hesitation in affirming that the generality of land, in most parts of England, might be made to produce double crops in a very little time; and with the addition of salt as a manure, instead of importing corn from abroad, to the great disadvantage of the nation, we might make our own produce, not only sufficient for home consumption, but also to supply the wants of our neighbours. I need not insist on the advantage to be derived from such an improvement, not only to the farmers, but to the public at large, for it is well known to every commercial man, of what importance it is that our merchants should always have it in their power to undersell their rivals in foreign markets: this, however, it will be impossible for them to do, even if there be no advance in the price of the raw material, unless by bringing down the price of provisions we proportionably keep down the price of labour. And no other mode can be adopted so likely to accomplish this most desirable end as the general use of salt for manure.

"We shall just mention one thing more in support of what has been advanced respecting the benefits of salt for manure, which falls within every farmer's notice, but which, probably, has not struck him in that light in which we are about to represent it. Cattle kept in a straw-yard, without any thing but straw for their sustenance, yield a poor light manure, little superior to natural soil; whilst cows or oxen feeding on good hay, assisted by corn, oil-cakes, or other invigorating food, produce manure of the best kind; thus the stronger the manures are impregnated with salts, of more value they are."

"We have at least *seven millions* of acres of uncultivated land in this kingdom What a loss to the community must this be! Here is ground sufficient, if properly cultivated, to furnish all the inhabitants of the country with bread, lying entirely waste, whilst they are paying a double price for the necessaries of life! Let us not neglect the advantages which providence has so kindly put in our power: the means of relief are within our reach, if we are not wanting to ourselves. If half the money that was necessarily and humanely spent during the late scarcity, in bounties on the importation of grain, had been laid out in inclosing waste lands, and giving premiums to farmers, I am convinced that in any future unfavourable season we should not be obliged to rely upon a scanty and precarious supply of grain from other countries, but on our own granaries at home, which have been well stored in a time of plenty by the wholesome produce of our native soil.

"What a pleasing prospect would it be to every Briton to see even the barren hills throughout the united kingdom converted into rich pastures, and the low lands made capable of producing the most abundant and luxuriant crops of grain, or artificial grass!

"If we turn our eyes to the empire of *China*, we shall there see the beneficial effects of a due attention to agriculture. The population, upon an average throughout that vast empire, amounts to the surprising number of three hundred inhabitants, to every square mile; that is, nearly three times the population of this country; and yet these people are maintained in plenty, without any assistance from other nations. How this is accomplished, Sir George Staunton, in his elegant and authentic account of Lord Macartney's embassy to *China*, informs us. 'The whole surface of the empire,' says he, 'is with trifling exceptions dedicated to the production of food for man alone. Few parks and pleasure-grounds are seen except those belonging to the Emperor. Little land is taken up with roads, the chief communication being by water. There are no commons or lands suffered to lie waste through neglect, or the caprice or for the sport of great proprietors. No arable land lies fallow. And whatever defects there are in the soil, it is supplied by mixture with other earths, by manure, by watering, and by careful and useful industry of every kind.' Let us copy after so useful an example.

"The present high price of salt, encumbered as it is with heavy duties, is such as to prevent all attempts of the farmer to ascertain its real utility by experiments. In order to do away this inconvenience, we sincerely hope the legislature will take this matter into its further consideration, and repeal the duty upon salt, as the only thing that can effectually promote the proper improvement of the country.

"The Salt Rock in Cheshire lies about thirty-six yards below the surface, in thickness from ten to forty yards; it extends twelve miles in length, and several miles in breadth; and throughout the whole district springs arise, which are made into salt. This rock, together with those which are in Worcestershire, &c. are sufficient to supply the whole kingdom for ever, without any fear of their being exhausted; and if properly applied, are a treasure far greater than the gold mines of Mexico and Peru."

"The following account we had from Mr. Thomas Sutton, of Middlewich, in Cheshire. 'About twelve years since I dug up,' says he, 'a quantity of earth out of a field where a new building was going to be erected, in which there was some appearance of salt-springs, the water from which had oozed up through the soil, and left an incrustation composed of the particles of salt upon the surface of the ground. This soil, together with the salt contained in it, I mixed with horse-dung; after it had lain some time in the heap, I spread it upon a piece of meadow-ground, which has been mown ever since, without any other manure having been laid upon it; and the other part of the meadow has been manured in the usual way every second year, and yet is now in no better condition than that which was covered with the salt and dung twelve years ago."

"A farmer at Glasson, near Lancaster, has for some time been in the habit of carting salt-water to put upon his dung whilst in the heap in the yard, before it was taken to be spread upon the ground, which he has found by experience very much enriches the dung, and makes it better manure. A great advantage might also be derived to the farmer from spreading sea-sand under and amongst the dung, whilst it is in collecting, during the winter, and also in the cow-house, stable, and yard, not only on account of the particles of the salt contained in it, but likewise by its retaining and absorbing the urine of the cattle, which is itself a very excellent manure."

"A farmer in the county of Sussex, some years ago, had a field, one part of which was very wet and rushy, and the grass produced upon it was of so sour and unpleasant a kind, that the cattle would not graze upon it: he tried several methods to improve it, but to little purpose; at last, having heard of the benefits of salt as a manure, he determined to try that; for which purpose he procured a quantity of Rock-salt, which in a random way, without any regard to the precise quantity, he threw upon this rushy ground, fencing it off from the other part of the field; the first effect of which was a total disappearance of every kind of vegetation. In a short time after, however, it produced the largest quantity of mushrooms ever seen upon an equal space of ground in that country. These in the spring following were succeeded by a most plentiful and luxuriant crop of grass, far exceeding the other part of the field in the richness of its verdure and the quickness of its growth: the cattle were remarkable fond of it; and though the salt was laid on it *upwards of twenty years ago*, this part is still far superior to the rest of the field." *Appendix to Mr. Hollinshead's pamphlet,*—page 33—35.

Mr. Wedge, in his agricultural survey of the county of Chester, says, "foul salt is a most excellent manure, either for pasture lands or fallows: and it is much to be regretted that so large a quantity as seven or eight hundred tons should annually, in Cheshire, alone, be lost to the community. The heavy duty laid upon refuse or dirtied salt prevents its use for manure.

"A difference of opinion," continues he, "having been entertained as to the utility of salt as a manure, we insert the following experiment which we have been favoured with by a gentleman of Norwich: In a meadow, where the after-grass being of a coarse, rank nature, which the cattle refused to eat, salt was laid upon a part of the meadow, and the cattle have ever since preferred the grass growing on that ground to every other part of the field, and eaten up every blade. He also states that the good effects of salt are particularly seen by mixing it even with the coarsest manure, and then laying it upon the land."

The late Thomas Butterworth Bayley, Esq. who was a Fellow of the Royal Society, and honorary member of the honorable Board of Agriculture in London, in his "Thoughts on Manures," after enumerating nineteen different substances which improve land, adds, "there is another source of improvement LOST TO THE COUNTRY, but *not through the fault of the farmers*, viz. refuse Rock-salt, and refuse liquor from the salt-works. I trust the very impolitic restriction which forbids the use of this valuable manure, and causes its *total loss*, will soon be removed by the exertions of this society, and those of the honorable Board of Agriculture." *From an address read to the Members of the Agricultural Society of Manchester, October* 22, 1795.

"Salt is the mother of all manures, as every kind of manure is higher or lower in value according to the salt it produces; and every kind of manure is portioned out to the land according to the quantity of salt or nitre it is thought to have in it. Formerly, salt was thought to be an impoverisher of land, but experience has taught us wisdom; it is now found to be otherwise, provided it is duly proportioned to the state the land is in, and mixed to mollify it as follows: take ten bushels of salt, and six bushels of dry ashes, and mix all together; then spread them on the land, and harrow them in with the seed: this is a sufficient dressing for an English acre, as it is better to repeat the dressing than to lay too much on at once. By being thus mixed, one particle incorporates and mollifies the other. Salt itself is rather too severe and harsh in its nature, and if laid too thick on, might prove of bad consequence; but if conveyed into the earth by a soapy, smooth method, will prove the real enricher the earth wants to send forth vegetation; this dressing will last for three crops. Sea-weed, shells, fish, sea-water, sea-sand, have in them a proportion of salts or nitre, and, therefore, must be esteemed a manure."—From C. Varley, Esq. *communicated to the Chester Chronicle by the Rev. B. Dacre of Moseley, near Manchester.*

(To be continued.)

ANSWERS TO INQUIRIES UPON

MILLET, FARM BUILDINGS, AND THE VALUE OF ORCHARD GRASS.

TO THE EDITOR OF THE AMERICAN FARMER.

DEAR SIR,

I am glad to answer your inquiries, on any matter, connected with the objects, you have, so zealously, brought into the view of the farmers in your county—and although I am not conscious that I merit the compliment you give to my judgment, I cannot resist the desire to embark with you, in the course which you have successfully pursued. To your inquiry—I answer, millet has not "the effect of binding the ground," nor is it an exhausting, crop when cut, in a *green* state. I do not cultivate it for its farinaceous product. I value it as fodder, more than any thing, I have seen. It requires *a good soil, very fine tilth, very light* harrowing, and rolling, at the time of sowing. I have no doubt, that "sheep would like it," if cut at an early stage, and from land, upon which the seeds had been sown thickly. If they be not thickly sown, the stalks become too large, and hard, for sheep—I should not recommend it for *their use*, unless it be cut at the time, when the heads have been just formed. I shall this year sow nearly thirty acres for hay. I shall cradle it when the seeds are half ripe, in order, that they may be thrashed, crushed in a mill, and after mixed with the fodder, when cut.

Millet is not "infallible," and although, I have been successful in its cultivation, some farmers have failed; oftener, from the fault of the seeds, the want of soaking, and care in harrowing, than any other cause. In recommending the cultivation of any new crop, some caution should be observed, until it be ascertained, what crops, it is fitted to follow. For if it should happen, that the experiment, be made upon a soil, which had been exhausted, by any crop, or system of crops, requiring *the same* particles, of matter for their nourishment, failure must ensue. Thus, the incaution of the Dilletanti, who in their zeal recommend for all situations, that which has succeeded but in a corner of a garden, or perhaps in their own heads alone, causes disgust, among practical men, for most that is new. I have tried orchard grass for ten years—it produces more pasturage, than any artificial grass, I have seen in America. There is some difficulty in "laying it down," at least two bushels per acre, should be sown, together with the usual quantities of clover seeds, in the latter part of September; it should be lightly harrowed and rolled. It ought not to be depastured the first year, as animals pull it out by the roots in large quantities during the early stages, of its growth.

There is no "substitute for Indian corn." The best auxiliaries are millet, and mangel wurtzel. The beets, when assisted by small quantities of corn meal, have a surprising effect, in certain stages of the fatting process. They have really, I think, a large portion of the excellence, which we should derive from our richest meadows if they could be placed in their most luxuriant state, in the small compass of a bullock's manger from January to May. Millet in its farinaceous state, is certainly very nutritious—but I consider it and all other crops, which ripen with great rapidity, and of which the leaves are small, great exhausters; as they cannot derive much of their nourishment, from the atmosphere, they must take the more from the soil.

We have all made, in this state, a great mistake, in cultivating a species of Indian corn, which grows high, with large stalks, requiring wide intervals for cultivation.

In New England a smaller sort is grown, which produces much more in grain, and infinitely less of stalks—as it admits of being placed in rows not so far apart, the soil, is less exhausted by the exhalations of the sun in the early part of the season, and is not so much impoverished, as it bears less weight in stems and tops.

"The management of cattle" should depend upon the purposes, for which they are destined. If I intended, my son, or my calf to be a great heavy unwieldy tender animal, bloated with fat, I would cover his back with great care, and stuff him with the most nutritious aliment; but if I meant him, to encounter difficulty, to have vigor of consitution, and symmetry in shape, I would expose him *after a certain age*, to constant exercise, to every vicissitude of heat, and cold; guarding always, as *much as possible*, against his *remaining in a state of rest, when wet*. If any quadruped, be taken from a hot climate, to a colder one, nature, very soon supplies a thicker covering of hair; and it will be thus found, that all the brute creation, if gradually exposed to cold, whilst they are protected from currents, and dampness of air, have more thrift than if they be confined, in a close atmosphere, of higher temperature. The secretions of milk, are certainly, much diminished by cold; those of fat, I am satisfied, are in no wise lessened, by any degree of temperature, which is not very severe. Ample supplies of clean straw, and friction, without, tend almost as much, to the thrift of neat cattle, as the increase of food, beyond a certain point, can affect their "proof" within.

I am, dear sir,

Your's, &c.

CURWEN.

Philadelphia County.

Powelton, Philad. County, July 1, 1823.

DEAR SIR,

Your profitable management, much more, than the high state of cultivation, in which the officers of the society found your farm, leads me to desire, not merely a statement of the system, you pursue, in the preparation of your soil—the arrangement of your fields—the rotation of your crops—but the mode of securing your fodder—feeding your cattle—and the application of their manure. I was struck, by the appearance of your stock, and gratified, at finding, that our opinions, and practice perfectly coincide, in the preparation of hay, and distribution of it in hay houses, instead of huge mows.

I have thought, the parade of Pennsylvania barns, about as profitable as the decoration of our fine blue waggons, or the musical bells attached to our teams. The ingenious mode adopted to deprive our grasses, of their most valuable, and nutritious parts, is so absurd, that it long since would have been abandoned, I should hope, had not our prejudices in favour of old usages, which generally keep practical farmers right, in this instance put us all wrong.

In good weather, most crops of grasses, can be secured without being *shaken* from the swarth. My uniform practice for many years has been to allow my grass to remain nearly two days, untouched, to gather it by an horse rake, cock it in *the hot part* of the day, salt it, and place it in an hay house, which admits a free circulation of air. My clover like yours, retains much of the color of its blossoms, and leaves. The advantage of pitching hay, from the carriage into "a bank barn," does not counterbalance, the expense of labour in preparing, the loss of nutrition in drying, and the great danger of fire from heating, as well as from the escape of moisture, which so often in *this* climate, attracts lightning, to the utter destruction of the building, and all the hopes of the farm.

The convenience of feeding, has also been brought to aid the arguments, in favour of a great Pennsylvania barn. We owe much of our success, to the industry, care, and skill, of our excellent German population, but I think, it may be questioned, whether the expense they incur, in the arrangement of their farm buildings, is not very often mischievous, not merely useless, in making tender their cattle, and diseasing them by bad hay. It is scarcely possible in this state, where the changes of climate, are sudden and severe, to guard farm stock, from suffering when they are made warm throughout the night, and necessarily, left exposed to the pelting of storms, during part of the day. I am convinced, that milch cows, and very young calves, require protection from cold—all other cattle, if guarded from wet, and currents of wind, feed with more appetite, digest with more ease, work with more vigour, and encounter accidental exposure, with less danger of harm, than if they be confined within thick stone walls, inhaling an impure atmosphere, from which by the instinct of nature, if not thwarted by the ill judged contrivance of man, they would fly.

I would suggest, that the position for the farm yard be selected as usual at the foot of a small hill, of which the southern side, should be cut in such manner, as to admit the erection of a barn sufficiently large for all its usual purposes, except that of holding hay, and feeding cattle. Roofs pitching to the South, and sufficiently capacious to protect all the hay, straw, fodder, and stock of the farm should be extended at both gable ends. For the support of the fodder lofts, and roofs, pillars of brick, or stone, should be erected at proper intervals; for the security of the bank, and the road at its edge—a wall somewhat higher, than it, should be built—a space of two feet, should be left, between the northern side of the loft and the wall. Racks should be placed perpendicularly, with their outer edges, exactly corresponding, and parallel with the wall, and side of the loft. Thus a space, of two feet would remain between them and the wall, to be filled with hay. A long shutter, sufficiently wide, may be secured by hinges, attached to posts, on the outer side of the wall—in order that when the rack shall have been filled, by pitching from above, it may be closed, at a proper angle to exclude rain or cold air.

Stalls for cattle, pens for sheep, and calves, should be at fit distances placed beneath the hay—pailings, and gates, might secure them on the southern, or outer side. The hay being exposed on two of its sides, would require infinitely less drying, than if pressed closely, in a great mass, within the thick walls of a barn. It is scarcely to be believed, by those, who have not seen the experiment, how little drying, grass requires, when it is to be salted, and thrown lightly, into an open hay house. By beginning at one end of a long loft, and discharging the loads, so as to not more than halt fill it, until the hay be extended to the other, by the time, that the end at which the farmer began, shall be quite filled. his hay, in despite ot the state, in which it had been hauled, will be sufficiently dry.

The advantages, I propose, are the saving of labour in making the hay, of money, in building the barn, of nutrition in not exhausting the grass by unnecessary exposure, to the rays of the sun; and to *practical* farmers, what to them, is of consequence, a return to their pockets, in profit, on cattle, which after being fed from January to July upon hay, and grass alone, may be exposed on Philadelphia shambles with credit to the feeder, as yours have been shown.

I am your's, &c.
JOHN HARE POWEL,
Corresponding Sec'ry, Penn. Agricultural Society.

WINE—VARIOUS KINDS AND THEIR USES.

"Le Vin est l'un des produits de la nature les plus difficiles á juger et á bien choisir: et les plus habiles gourmets sont souvent mis en défaut."—*Manuel du Sommelier*, Paris, 1817, p. 1.

Wine, especially Port, is generally twice spoiled—before it is considered fit to be drank!!! The *wine-maker* spoils it first, by overloading it with *brandy* to make it keep.—

The *wine drinker* keeps it till time has not only dissipated the superabundant spirit,—but even until the acetous fermentation begins to be evident,—this, it is the taste now to call "*flavour*,"—and wine is not liked, till it has lost so much of its exhilarating power, that you may drink half a pint of it before receiving that degree of excitement,—which the wine-drinker requires to make him happy. We mean a legal PINT containing 16 ounces.

The measure of a BOTTE OF WINE ought to be as definitive, as that of a POT OF PORTER:—is it not astonishing that the Legislature have not ordered *a standard and stamped quart*, for the wine-merchant—as they have a pot for the Publican?

This would be equally as desirable to the respectable wine-merchant,—as to the public.

It would protect the former against the injurious competition of those who at present, by vending wine in bottles of inferior dimension, impose on the unwary purchaser under pretence of selling at a lower than the market price.

The purchaser ot a dozen bottles of wine expects to receive three gallons ot wine.

Proportions of the wine gallon, according to the last London Pharmacopœa:

Gallon.		Pints.		Fluid Ounces		Drachms.		Minims or Drops.
1	=	8	=	128	=	1024	=	61,440

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There are  32 ounces in a legal wine quart.
Multiply by 12 quarts in three gallons.
           ——
          384 ounces in ditto.
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Measure the number of ounces your bottle holds—divide 384 by it, and the quotient will give you the number of such bottles required to contain three gallons of wine.

Some bottles do not contain more than 26 ounces.

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26) 384 (14 bottles, 1 pint, and a quarter.
    26
    ——
    124
    104
    ——
     20                 OR,
    Multiply        26, i. e. the number of ounces
    By              12 your bottles will contain.
                    ——
                   312  the number of ounces
                        contained in your dozen
                        bottles, which
  Ought to hold    384  the number of ounces in
  Subtract         312  three gallons.
                ————
Divide by the  }
number of oz.  }  32) 72 (2 quarts and half a pint
in a quart     }      64    short of measure.
                      —
                      8 ounces.
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So, instead of THREE GALLONS—you have only *two gallons, one quart, and a pint and a half.*

The quantity a bottle will contain, may easily be accurately ascertained, *by* LYNES's *graduated glass measure*, which holds half a pint, and is divided into ounces, &c.—*it is a convenient vessel to mix* GROG *in.*

A PIPE OF PORT contains, on the average, 138 gallons, of which three must be allowed for lees, &c.—This is enough for waste, if the wine has been properly fined, and steadily bottled.

A BUTT OF SHERRY contains . 130 gallons.
MADEIRA, . . . 110 ditto.
Hogsheads of CLARET, ... 55 ditto.

It is convenient for small families to have part of their wine in *pint bottles.*

That wine is much best when quite fresh opened, is a fact it is needless to observe,—half a pint of wine (*i. e.* 8 ounces, *i. e.* 4 ordinary wine-glasses) is as much as most people (who have not spoiled their stomachs by intemperance) require.

The rage for superannuated wine,—is one of the most *ridiculous vulgar errors of modern epicurism*,—"the bee's wing," "thick crust* on the bottle," "loss of strength &c." which wine-fanciers consider the beauty of their tawny favourite, "fine old port,"—are forbidding manifestation of decomposition, and the departure of some of the best qualities of the wine.

The age† of maturity for exportation from Oporto, is said to be the second year after the vintage, (probably sometimes not quite so long.) Our wine-merchants keep it in wood from two to six years longer, according to its original strength, &c.—surely this must be long enough to do all that can be done by keeping it—what crude wine it must be to require even this time to ameliorate it—the necessity for which, must arise either from some error in the original manufacture,—or a false taste, which does not relish it, till time has changed its original characteristics.

Ordinary Port is a very uncleansed, fretful wine, and experienced judges have assured us, that *the best Port* is rather impoverished, than improved by being kept in bottle longer than two* years, supposing it to have been previously from two to four years in the cask in this country,—observing, that all that the outrageous advocates for "*vin passe*"—really know about it, is, that SHERRY *is yellow*,—and PORT is *black*,—and that if they drink enough of either of them,—it will make them drunk.

WHITE WINES, especially *Sherry* and *Madeira*, being more perfectly fermented, and thoroughly fined before they are bottled—if kept in a cellar of uniform temperature, are not so rapidly deteriorated by age.

The temperature of a good cellar is nearly the same throughout the year. *Double doors* help to preserve this. It must be dry, and be kept clean as possible.

The art of preserving wines, is to keep them from fretting, which is done by keeping them in the same degree of heat, and careful corking.† "If persons wish to preserve the fine flavour of their wines, they ought *on no account* to permit any bacon, cheese, onions, potatoes, or cider, in their wine-cellars. Or, if there be any disagreeable stench in the cellar, the wine will indubitably imbibe it; consequently, instead of being fragrant and charming to the nose and palate, it will be extremely disagreeable."—CARNELL *on wine making*, 8vo. 1814, p. 124. See also *Manuel du Sommelier, par A. Jullien*, Paris, 1817.

That MADEIRA (if properly matured before) improves in quality by being carried to the *East Indies* and back, by which voyage it loses from 8 to 10 gallons,—or to the *West*, by which about 5 are wasted,‡—however these round about manœuvers may tickle the fancy of those folks who cannot relish any thing that is not far-fetched, dear bought, and hard to be had, and to whom rarity is the "*sine qua non*" of recommendation—it is one of those inconvenient prejudices, from which common sense preserve us!

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* *A* thick crust *is not always the consequence of the wine having been very long time in the bottle—but is rather a sign that it was too little time in the cask, or has been kept in a very cold cellar.*

† "*Had the man that first filled the* Heidelburgh Tun *been placed as sentinel to see that no other wine was put into it, I believe that he would have found it much better at* 25 *or* 30 *years old, than at* 100 *or* 150, *had he lived so long—retained his senses, and been permitted now and then to taste it—a privilege with which the natives are seldom indulged.*

"*To give a great price for wine, and keep it till it begins to perish, is a great pity.*" *I can not believe that very aged wine, when bordering on acid, is wholesome, though some wine drinkers seem to prefer it in that state.* "*Respecting* Port wine, *there is a great fuss made by some men about its* age *and the* crust *on the bottle, as if the age and crust on the bottle constituted the quality of the wine.*" *Such* crusty *gentlemen shall not select wine for me.*"—YOUNG's *Epicure*, 8vo. 1815, p. 23, 28, &c.

*"*Wines bottled in good order, may be fit to drink in six months, (especially if bottled in October), but they are not in perfection before twelve. From that to two years they may continue so; but it would be improper to keep them longer.*"—Edinburgh Encyclop. Britan. *vol. xviii. p.* 72, *article* Wine.

† "*Cork the bottles very closely with good cork, and lay them on their sides, that the cork may not dry and facilitate the access of the air. For the greater safety, the cork may be covered with a coating of cerement applied by means of a brush, or the neck of the bottle may be immersed in a mixture of melted wax, rosin, or pitch,*" *ACCUM* on making wine, 1820, *p.* 40.

‡ *A PUNCHEON OF BRANDY containing* 130 *gallons, after remaining in cask in a merchant's cellar for three years, lost two gallons in measure and ten gallons in strength. The stronger the spirit, the sooner it evaporates.*

The London Dock Company are not answerable for any decrease of quantity in a PIPE OF WINE *left under their care, provided it does not exceed one gallon for each year—which it is supposed to waste in that time.*

The vulgar objection to *new wine*—(by which we mean wine that has been maturing in wood two years in Portugal—two in England—and in bottle more than twelve months,) is that its exhilarating qualities are too abundant, and intoxicate in too small a dose—those "*Bons Vivants*," to whom "the bottle, the Sun of the table," and who are not in the habit of crying to go home to bed while they can see it shining—require wines weaker than those which are usually imported from Spain and Portugal, —however Port and Sherry may be easily reduced to the standard desired by the long-sitter, —"*paululum aceti acetosi*," will give the Acid Goût,—"*aqua pura*" will subdue their spirit "*ad libitum*,"—and produce *an imitation of the flavour acquired by age, extempore*—and you can thus very easily make fine fruity nutritious new wine,—as light,—and as old,*—and as poor, as you please—and fit it exactly to your customer's palate, whether "*Massa drinky for Drinky,—or drinky for Drunky Massa.*"

To ameliorate very new, or very old wine—mix a bottle of the one with a bottle of the other—or to a bottle of very old Port, add a glass or two of good new Claret—to very new, a glass of Sherry.

Of all our senses,—*the taste*, especially, for liquids, is the most sophisticated slave of habit —"De gustibus, non est disputandum."

The astringent matter, and Alcohol—which render Port wine the prop of an Englishman's heart—are intolerable to the palate of an Italian, or Frenchman.—But a stomach which has been accustomed to be wound up by the double stimulus of Astringents, and Alcohol also,—will not be content with the latter only,—especially if that be in less quantity—as it is in the *Italian and French wines;* which therefore, for the generality of Englishmen, are insufficiently excitant.

He who has been in the habit of drinking porter at dinner,—and Port after—will feel uncomfortable with *home-brewed Ale* and *Claret.*

Mr. Accum, the chemist, annalyzed for the Editor some Port and Sherry of the finest quality—the Port† yielded 20 per cent—and the Sherry 19.25 per cent. of Alchol of 825 specific gravity—*i. e.* the strongest spirit of wine that can be drawn, full double the strength of Brandy, which seldom has 40 per cent. and common Gin* not more than 30—or 25.

Some people have a notion that if they go to the docks, they can purchase a pipe of wine for twenty pounds less, than they must pay to a regular wine merchant—and, moreover, have it *neat as imported*—as if all wines of the same *name*, were of the same quality.

Port *varies at Oporto in quality and price as much as* Porter *does in London*—it is needless to say how difficult it is to obtain the best beer at any price—it is quite as difficult to obtain the best port wine at Oporto, where the very superior wine is all bought up at a proportionately high price by the agents for the London wine merchants.

Brandies and wines *vary in quality quite as much as they do in price:* not less than twenty pounds per pipe in the country where they are made.

The only way to obtain genuine wholesome liquor, is to apply to a respectable wine merchant—and beg of him to send you the best wine at the regular market price.

If you are particular about the quality of what you buy—the less you ask about the price of it the better—if you are not, bargain as hard as you please.

"There are *three sorts of drinkers:* one drinks to satisfy nature, and to support his body, and requires it as necessary to his being.

"Another drinks a *degree* beyond this, and takes a larger dose to exhilarate and cheer his mind, and help him to sleep—these two are lawful drinkers.

"A third drinks neither for the good of the body or the mind, but to stupify and drown both."—Maynwaringe *on Health, &c.* 12mo. 1683, p. 123.

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* Cornaro *complains that* old *wine was very disagreeable to his stomach, and* new *wine very grateful; his dose was fourteen ounces,* (i. e. *seven wine-glasses*) *per day.*

† *Fermented liquors furnish very different proportions of Alcohol—and it has been sometimes supposed that it does not pre-exist to the amount in which it is obtained by distillation; but some experiments I made upon the subject in* 1811 *and* 1813, *and which are printed in the* Phil. Trans. *for these years, tend to show that it is a real educt, and not formed by the action of heat upon the elements existing in the fermented liquor. The following table exhibits the proportion of Alcohol by measure existing in one hundred pints of wine."—Brande's* Manual of Chemistry. 8vo. 1819, p. 400.

Hock	14
Claret	15
Sherry	19
Port	
Madeira . . .	24 *per cent. Alcohol.*

* "*It would save many lives if gin, &c. was not allowed to be sold until reduced to one third the strength of proof spirit. People do not at first drink from any liking or desire, but being cold, or faint with hunger or fatigue, they find immediate comfort and refreshment from the use of spirits—and as they can purchase a dram with less money than they can cover their back, or fill their belly, so they gratify the strongest and least expensive appetite—and insensibly become drunkards.*"

"*Ardent spirits are not only eminently destructive to the body, but are the most powerful incentives to vice of every kind; drunkenness engenders all other crimes. Does the robber pause in his trade? Does the murderer hesitate?—they are presently wound up at the gin shop. Has the seducer tried his arts in vain? The brothel is more indebted to this source, than to all the other lures to seduction.*" *From* Hint for the Preservation of Health.—*Callow*, 1813, 12*mo. p.* 2.

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PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Williams & O'Donnell's Inspection Warehouse, during the quarter, commencing on the first Monday of October, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	714	81	24	819
Number delivered.				864

JOSIAS STEVENSON, Inspector.

Treasury Office, Annapolis, Oct. 11, 1823.

True Copy, from the original report on file in this office. B. HARWOOD, Tr. W. S. Md.

THE FARMER.

Baltimore, Friday, November 14, 1823.

☞ The members of the Maryland Agricultural Society will meet at the office of the Editor of the American Farmer on Wednesday next—the 19th, at 10 A. M. for the choice of officers for the ensuing year.

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☞ The next number of this Journal will contain the report of proceedings at the late Cattle Show and Exhibition of the Maryland Agricultural Society.

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☞ The letter from Col. Powel on various topicks of the first moment, to *every* farmer, will command the attention which is due to the suggestions of a gentleman who fortunately unites with great zeal, a sound practical judgment to discriminate between what is plausible in theory only, or practicable alone by extraordinary means; from that which is susceptible of being profitably put in operation by the generality of farmers under ordinary circumstances. It is when gentlemen of opulence and science thus make themselves familiar with the details of the field and the farm yard, and cheerfully instruct us, not only in the *why*, but the *how* things should be done and managed, that money and labour are applied to the greatest advantage, and the business of the *farmer* acquires that superior dignity and consequence in the public esteem, and safe and substantial profit in dollars and cents, which rightfully belongs to it—and who does not perceive that augmenting attractions and increasing respectability are filling this walk of life with young men of superior attainments, who hitherto sought distinction in other and much less independent and useful departments of society?

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The news of the capitulation of Cadiz, has affected the prices of grain, flour, &c., as will be seen below.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard street, from wagons, $6 62½—fine do. $6 12½—Wharf, do. $6—White wheat, $1 15 to $1 20—Red do. $1 10 to 1 13—Lawler, $1 12 to 1 15—Washington white, $1 15 to $1 30—Rye. 44 to 45 cts.—Corn, 42 cts.—wharf Oats, 33 cts.—wagon Oats, 37½ cts. —Beef, 6 cts. per lb.—Live Cattle, $5 to $5 50, per cwt.—Bacon, hog round, $10—Pork, $7 per c. lb. 6 to 8 cts. per pound—Mutton, 4 to 5 cts. per lb.—Beans, retail, $1 25, cargo price, $1—Peas, retail, 62½ cts., cargo price 48 to 50 cts. —Red Clover Seed, $6—Orchard Grass do. $2 50 Herds' Grass do. $2 50—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 33 cents per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, No. 1, $6 50, very dull, No. 2, do. $5 to $5 50, do.—Herrings, No. 1, $2 50 per bbl., very dull No. 2, $2 25 do.—Fine Salt, 75 cents per bush., coarse, do. 70—Butter, (firkin) 14 cts. per lb—Eggs, 12½ cts. per doz.—New Hay, $14 per ton, old do. $16—Straw, $7.

Maryland Tobacco.—No Sales.

Printed every Friday at $3 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

MARYLAND CATTLE SHOW AND FAIR,

No. 4.

The exhibition held by the Maryland Agricultural Society, on the 5th and 6th days of November, placed many very interesting objects under the observation of its members and their much respected visitors; and if, in some few instances, the number of animals was not so large as at former shows, this deficiency was abundantly supplied by the far greater extent of young, *improved stock*, that crowded our pens, and gave visible signs of those benefits which are now widely speading, through these walks of husbandry—upon no former occasion, have we witnessed so many, or such valuable animals grouped together in Maryland. And when we remember, that this was but the third exhibition had on this Shore by our Society, we confess very candidly, that our most sanguine expectations have been surpassed by the display of so many creditable proofs of a well directed, and heartfelt emulation, which has been readily and extensively made to operate on the feelings and measures of hundreds, who so lately were unwilling to be drawn, even in connexion with the independent and creditable business of their lives, from the retired scenes of their every day occupations. But thanks to that spirit of improvement which characterises this age, we have now, through its happy influence, acceptable assurances of long continued and well concerted efforts to diffuse the knowledge and induce the adoption of every new mode of agricultural advancement; resources of profit will be disclosed, that have laid for years unexplored—economical means will be employed, that have been heretofore neglected or unknown—productions will be created and multiplied, in forms so various, and extent so wonderful as to surprise, delight and reward their ingenious and enterprising authors, whilst they shall be hailed as the discoverers of new enjoyments, and the benefactors of society.—In a cause, which seeks to augment, the blessings of every household, who will not engage? There are none to censure the means of our enterprise, the peaceful force of commendable ambition, the list of prizes, and awards of merit, that we fairly offer to those, who shall excel in designated matters. And since every one approves and applauds our undertaking, may we not hope that our members will augment with the progress of time, and that an institution which seeks exclusively to advance the general good, will ere long obtain the patronage of our *public authorities?* Boards of Agriculture and Societies formed in other states, have been patronized by their governments to the honor of rulers, and the advantage of the governed. And as we have been favoured with the presence and approbation of intelligent men, from every quarter of our state, and have given to them, on both Shores, the most conclusive demonstrations of the disposition and tendency of our association to be useful to the state at large, we fondly hope, that these facts will procure for our established society, enlarged means to exert its mild and salutary influence over the industry of the great mass of our population.

The display of machinery and implements, lately made to us, reflected great credit on our mechanicians, who continue to vie harmoniously with each other, in their efforts to render their manufactures not only stronger and more convenient in form, but more powerful in principle—of course more operative and easy to employ, whilst unbounded competition fixes fair limits to the prices, and gives notoriety to the cheapest among the best.

The specimens of crops, and the statements of their acreable extent, were truly gratifying, and in future, we hope to see them multiplied, and in all cases strictly ascertained, and fully certified—it is important to know how much may be produced per acre in our climate, of different crops, by definite tilth and manures, upon given soils—all things should be taken into the account and be fully set forth—no circumstance that has affected the results, should be left unknown: when we shall have ascertained what may be done in this way, we have the course and the goal fairly before us—the rest will depend on our respective means, judgment and perseverance. And if "the race is not always to the swift, nor the battle to the strong," still the slow are generally the sure, and by recording the details of culture and management, which our rules ought to require and procure from all competitors, we shall fix lights on high, to guide the steps of all to yet greater improvement in every operation of husbandry.

The recent exhibition of household and domestic manufactures, was the first that has been made to us on this Shore, and therefore we presume it was, that it comprised a smaller number of specimens and articles, than the Society expected, or wished to see—but we entertain no doubt that the liberal amount of premiums bestowed for the encouragement of this truly creative branch of industry, will bring to future exhibitions a greater variety of manufactures—the production of which so well employs whole days and weeks that otherwise would pass listlessly away, nor leave a trace to show that they had not been lost forever. Who would not patronize these testimonials of untiring usefulness, and grant another and another tribute to those monuments of household worth, that shall go down from age to age, mementos of a mother's or a sister's merit, which claimed applause, and won it from competitors?

The field that was devoted to our ploughing matches became a most enlivening scene—the palpable desire of each competitor to merit approbation, presented a gratifying evidence of emulation on the part of our mechanicians, and their ploughmen; and, where all did so exceeding well it became difficult to prefer, and impossible to censure. The experience gained in this field will lead to more perfect arrangements, and these will insure more precise and definite information, than it was recently in the power of the Committee to acquire and impart. The introduction of oxen to this scene of labor, was an unexpected pleasure to the spectators, and as acceptable to all as it was unlooked for by most of them—the more agreeable, no doubt, from the perfect manner in which both teams had been trained to work, and especially from the great skill displayed by a young teamster, who ploughed a lot in the most masterly style, whilst he governed his oxen by his voice alone.

The offer at public sale of many choice young live stock on the last day of the Show, presented an opportunity to buy them at reasonable prices—and we regret that notice had not been given by the owners of those animals, of their intention to sell them thus, at moderate prices, long enough before the Show, to have permitted orders to arrive before the day of sale from farmers at a distance, who might have wished to purchase—besides, we were sorry that the weather was so inclement as to have caused many persons of this vicinity to think that a public sale of good stock would not be attempted—hereafter timely notice had best be given, and farmers may be assured that many and very choice animals, of most approved breeds, and of different species, will be offered at our Fairs on public sale.

The opinion that we ought to appropriate three entire days to our Exhibitions seems now very generally to prevail among the members of the Society. The Committees were all too much hurried through their duties, and with many spectators had too little time to observe the various objects which merited particular examination. The Society had also to neglect some important business: but these matters may be better arranged if the proposition to hold the Show and Fair, during three days shall finally prevail.

Some misapprehensions have existed that had best be corrected whilst the recollection of them is perfect. Many persons have supposed that it was necessary to become members in order to exhibit stock, &c. &c., or to enter into the ploughing matches, and that in these trials no individual could enter more than one plough for each premium; but these impressions are erroneous—the exhibition is free to every body who has any thing to show—there is no limit to the number of animals, articles, or implements that may be shown or tried by any person, but what may be imposed by the nature or extent of their own resources—and all the privileges, of membership, are freely offered to the acceptance of every friend of agricultural improvement, who is willing to advance the objects of our association, by simply paying a small annual contribution, to create a premium fund.

It happened, unfortunately, that the grand meeting at Washington, friendly to the Chesapeake and Ohio canals occurred so nearly at the time of our Show as to deprive us of the company of many distinguished farmers of Maryland, and other states, who expected to be with us—and the society regretted that any cause should have deprived them of the presence of their especially invited friend, the gallant PORTER; the cause of whose reluctant absence has been better stated by himself, than we could express it, as will appear by his letter, ordered to be published.

The Society particularly regretted that they were denied the pleasure which they anticipated from an address that had been prepared for the occasion, by Robert G. Harper, Esq. but as they were only deprived of that satisfaction by the inclemency of the day, and his regretted frail state of health—they unanimously requested him to furnish a copy of his address for publication in our Journal, where we shall be happy to give it an early insertion.

Edit. Am. Far.

REPORT ON HORSES.

The horse has been the theme of admiration in all ages, and is of such great use in the affairs of Agriculture, Commerce, War and Sporting, that all laudable means, should be used to improve the breed of an animal, at once so noble, and extensively employed. We are happy to discover a spirit in our state favourable to this improvement, and no doubt, the institution of premiums by the Society, will have a most happy effect.

The committee to whom has been confided the important duty of deciding on the merits of horses, beg leave to report, that they have assigned to Mr. Henry Cost, of Frederick county, the first premium for his bay horse young Post Boy, possessed of size, strength and figure rarely to be met with in a blooded horse.

To Mr. T. R. S. Boyce, of Baltimore county, the second premium for his grey horse Fagdown, his fine action, power and docility, recommend him as a valuable animal to improve the stock of road horses.

To Mr. Thomas P. Stabler, of Montgomery county, the first premium for his bay mare, have ing proved herself a fine brood mare,* from the exhibition of her colts, which are very promising animals.

To Mr. Samuel Owings, of Baltimore county, the second premium, for his fine full bred mare Primrose.

There were also exhibited several other horses, and the committee would have been gratified, if premiums had been placed at their disposal equal in number to those, which in their estimation merit them, and of this class they particularly designate Mr. Thomas Lewis' bay mare, as also a full blood filly, belonging to Gen. Ridgely, and a filly the property of Mr. John Schwartz, 5 months old, of beautiful proportion, and in uncommonly fine condition; the two latter, however, do not come under the denomination of *brood mares*, to which class the committee were exclusively confined.

The committee have to lament, that the state of the weather was peculiarly unfavourable for the exhibition of horses, it being in most cases impracticable to view them *in action*—there were a number entered for premium, which from the above circumstance, were not submitted to their consideration.

HENRY THOMPSON,
Chairman.

REPORT ON ASSES AND MULES.

The committee appointed to adjudge the premiums for asses and mules take leave to report, that there was no jack nor jennet offered to the Society for premium, and that but two pair of mules competed for your premiums.

We adjudge unanimously the premium for the best mule, to Wm. Patterson, Esq. of the city of Baltimore, and

To the same gentleman, the premium for the second best mule.

The committee regret that there was not a fuller exhibition of this kind of stock, as they believe it to be highly valuable to the farmer.

All which is respectfully submitted.

THOMAS EMORY,
Chairman.

REPORT OF THE COMMITTEE ON CATTLE.

The Committee on Cattle report, that the animals presented for their inspection were generally very fine, and their improvement furnishes the strongest example of the good effects of that spirited system which annually produces a competition among the farmers of our state in relation to our valuable live-stock. As a further evidence of the fine quality of the cattle, the Committee declare, that they had much difficulty in deciding upon the respective merits of some of the classes, and were often divided in opinion.

Taking the cattle in order, as presented to them on the list, they award the first premium, *for the best bull over two years old*, to Mr. Caton, for his full bred Alderney bull, five years old, there being no other in competition, and they were bound by a rule, in such case, made and provided.

The premium of a silver can, *for the best bull under two years*, they award to the Honourable Edward Lloyd, of Talbot, for his bull calf "Pilgrim," by Blaze, out of White Rose, eleven months old.

The premium of a silver can, *for the second best bull under two years*, they award to Mr. J. W. M'Culloh, for his bull calf "Warrior," by Champion, eight months old.

On this class of cattle, the Committee cannot refrain from making mention, in the highest terms of commendation, of several other fine and beautiful animals, among which are Mr. Carnan's bull calf, seven months old, by a full bred Bakewell bull of Gen. Ridgley's breed, (between whom and "Warrior" there was some difficulty in deciding); the young Holderness bull, "Comus," exhibited by Mr. Joseph Gales, Jr. of Washington city. This animal, 14 months old, is by Columbia, a bull of the Holderness blood; being sired by Gorham Parson's bull Holderness, out of an Holderness cow, which took a prize at the Brighton Cattle Show; Col. Thomas Emory's bull calf, 16 months old, by Bergami—Mr. Henry Thompson's bull calf, "Clifton" 12 weeks old, out of an imported Devon cow, by Mr. William Patterson's Devon bull.—Mr. William Patterson's Devon bulls; Mr. William Lorman's brindle bull 15½ months old; and Mr. J. W. M'Culloh's bull calf "Reuben" of the Tuscan breed, 8 months old, by Duke of Tuscany, imported by Commodore Bainbridge.

MILCH COWS.

The premium of a silver creampot, *for the best milch cow*, is awarded to Mr. Christopher Carnan, for his black cow, mother of the 7 months bull calf of such high merit, before spoken of.

The premium of a silver tumbler *for the second best milch cow*, is awarded to Mr. David Williamson, of Baltimore county, for his large spotted cow of Doctor Fall's breed, with a calf by her side.

Among the other milch cows, there were several whose merits were very considerable: Mr. Whittimor's fine cow, Mr. John Mercer's Hereford cow, with her calves; together with Mr. Lloyd N. Rogers' two cows which were conspicuous for thriftiness and size.

HEIFERS.

The premium of a silver cream pot, *for the best heifer*, was awarded by one vote to the Honorable Edward Lloyd of, Talbot, for his heifer "Flora," 17 months old, by Bergami, in competition with Mr. Lloyd N. Rogers' "Snow Ball."

The premium of a silver tumbler *for the 2d best heifer*, was unanimously awarded to Mr. Lloyd Rogers, of Baltimore county, for his heifer "Snow Ball," 18 months old, of the improved Short Horn breed, got by "Bishop," out of "Europa."

Of this class of cattle, there were many of great merit and beauty. The Committee particularise Mr. Henry Thompson's red and white heifer "Fanny," 16 months old, by Mr. William Patterson's full bred Devon bull, out of a cow bred by Gen. Ridgely of the Holland and English breed; Dr. Allen Thomas' half Devons, and a heifer of the Bergami breed; Mr. William Patterson's Devons, Mr. Morris's Devon.

The premium of six silver table spoons for the best yoke of oxen, is awarded to Mr. James Gettings, of Long Green, for a yoke of black oxen, not three years old.

The premium of a silver can for the 2d best yoke of oxen, is awarded to Mr. James Gettings, of Long Green, for a second yoke of black oxen.

But few yokes of oxen were presented for premium, and they were all good, indeed, fine; a yoke of Mr. David Williamson's, of Baltimore county, was admired, but excluded from competition, in consequence of one of them being bred out of the state.

The Committee will close their report with remarking, that although they feel conscious of having discharged the duty assigned them with their best judgment, yet such was the unfavourableness of the weather yesterday, and so great was their exposure and suffering from the rain, when called to view the cattle, that there may have been some animals of much merit, not particularly specified in this report, an inadvertence arising from such causes they hope will be pardoned, and they congratulate their brother farmers, from the specimens exhibited at this Cattle Show, upon the great improvement that is now so generally making in the breed of our stock of cattle.

ROBERT H. GOLDSBOROUGH,
PEREGRIN WETHERED,
AARON CLEMENT,
D. WILLIAMSON, Jr.
SAMUEL T. KENNARD.

REPORT ON HOGS.

The Committee to whom was referred the examination of the swine, offered for exhibition, beg leave to report, that they have attentively examined the same. Before entering upon the description of those offered for premium, they cannot forbear stating to the Society, their unfeigned regret that so few of that description of stock should have been brought for exhibition; but judging of the future from experience, they hope that as the usefulness of this institution increases in the public estimation, the exhibition of swine will be more ample.

The Committee award the premium of one soup ladle, value $10, to the boar, offered by Theodore Anderson, of Baltimore county, of the Suffolk breed, 3 years old.

The Committee award a premium of one gravy spoon, value $5, for the second best boar, of the Parkinson breed, 4 years old, to James Cunningham, of Frederick county.

The Committee award a premium of a soup ladle, value $10, for the best brood sow, to Mr. J. W. Stone, of Baltimore county.

The Committee award a premium of a gravy spoon, value $5, for the second best brood sow, to Mr. D. Williamson, Jr. of Baltimore county.

The Committe beg leave further to add, that there were exhibited 4 pigs, of rather upwards of 3 months old, of a mixed breed, very deserving of attention, by Mr. Barney, of Delaware; but inasmuch as these do not come within the rules of the Society, the committee can only remark on the superiority of the breed.

To these may be added 4 other pigs, belonging to Mr. John S. Skinner, forwarded to him by Mr. Johnston of Bridgeton, which the committee are sure will be found to be a valuable acquisition in the improvement of the breed of that valuable race of animals.

GRAFTON DUVALL,
SAMUEL OWINGS,
JOHN MARSH.

REPORT ON SHEEP.

The committee appointed to examine the sheep, have performed that duty, and beg leave to report, that they first proceeded to inspect those of the merino breed. In deciding upon the merits of this sort of sheep, which are principally valuable for their wool, the committee felt themselves bound to direct their attention chiefly to the quality of the fleece. Although several other rams of great merit were exhibited, yet the committee after a close inspection were unanimously of opinion, that the ram belonging to Gen. John Mason, of Analostan Island, had the finest fleece, and therefore award to him the premium of a pair of salts, value $10.

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* *This mare was raised, and is owned by Richard Brook, of Montgomery county.*

Governed by the same principle, the committee after inspecting the merino ewes, decided in favour of the pair exhibited by Dr. Richard G. Stockett, of Anne Arundel county, and award him also a pair of salts, value $10.

In deciding upon the merits of other breeds, than the merino, the committee had a principal regard to the value of the carcase, and were of opinion, that the two rams of the Dishley breed, offered by Mr. Barney, of Delaware, for a premium, were the best exhibited, and award him a goblet, valued at $10.

After an examination of the ewes of other breeds than the merino, the committee decided in favour of a pair exhibited by Dr. Allen Thomas, of Anne Arundel county, a cross of the Dishley, with the broad tailed Barbary sheep, and award him a premium of a goblet, valued at $10.

In awarding the premium, offered for the five best fat wethers, the committee were governed by the same principle, and after some hesitation, between the merits of those exhibited by Edward Lloyd and Charles C. Brown, Esquires, of the Eastern Shore, although the fleeces of those belonging to the latter gentleman were superior, yet the carcase of those belonging to the former, were somewhat better, and the premium of a can was accordingly awarded to Mr Lloyd, valued at $10.

The committe cannot close their report, without expressing their satisfaction, on inspecting the fine sheep exhibited by several other gentlemen. They, in a particular manner, viewed with much pleasure a parcel of ewes, of the Dishley breed, shewn them by Mr. Barney of Delaware, also another parcel, with two rams of the same breed, exhibited by Mr. Clements of Pennsylvania, and the broad tailed Barbary ram, exhibited by Dr. Allen Thomas of Anne Arundel county.

VIRGIL MAXCY,
JAMES GITTINGS,
R. W. BOWIE,
J SYKES,
J. S. WILLIAMS. } *Committee.*

REPORT ON MACHINERY AND IMPLEMENTS.

The Committee on Agricultural Machinery and Implements, Report—That they have with much pleasure viewed and examined a great number and variety of useful implements and machinery, brought together by our intelligent and enterprising mechanics, and which well deserve the continued patronage of the public; but feeling themselves confined by their instructions to the especial consideration of the merits of machines, or implements of new principles or construction, they have endeavoured to investigate more thoroughly those, which have appeared to them to come within this description.

They have long lamented the want of neatness in the preparation for market of our most valuable staple, wheat; and have considered a machine of simple contrivances, that could be constructed at a cost within the means of the small farmers for threshing wheat, as one of the real desiderata for the great body of our agricultural community. A machine for this purpose, invented by Mr. J. Pope has been submitted for their inspection. The principle is not entirely new, and it is so much the better on this account, as the committee can, from their knowledge of it, pronounce with more certainty upon its utility. They consider it in fact the Scotch machine, as constructed by several of our mechanics, and as imported by Mr. Dawson, reduced within the power of one horse; and with a trifling variation in the application of the force, we believe a single ox might be used in it to advantage.

The wheat is well threshed out, but scattered too much and not sufficiently separated from among the straw; tho' it is believed these objections might be easily obviated. On trial before us the wheat in the barn, and the straw to be put away also in the barn, with one horse, two men and two boys, this machine threshed straight wheat at the rate of 36 sheaves in 7 minutes, and its average work in practical operation is stated by the constructor, Mr. Merrick, of Philadelphia, to be 70 bushels per day.[*]

The price is $125, and we deem it worthy of the first premium

The next objects considered most worthy of the especial notice of the Committee were two ploughs for seeding wheat, one offered by Mr. Ramsey; the other invented by Virgil Maxcy, Esq. and made at the manufactory of Mr. Robt. Sinclair in Baltimore.

Mr. Ramsey's is composed of a right and left mould board forward, and a double mould board following between them, so as to make it cast four furrows, two each way, and was made for covering wheat between rows of Indian corn; but we think it would be a difficult implement to construct to run well, and unless the corn rows could be laid out of the same width, or with much more exactness than is found generally practicable, it would be too apt to leave that operation imperfectly performed. For working corn before the end of June, where so much nicety in breaking the whole space, and in laying up every furrow alike, would not be necessary, we should deem it a useful and real labour-saving implement;—but we prefer Mr. Maxcy's *Eschelon plough.* It has been well tested by two years' experience. As a double, or triple plough, it will be found useful in working corn, or seeding wheat among it, and in the preparation or seeding of naked fallow. They have been extended to the combination of five ploughs, casting five furrows, and with three horses and one ploughman executed the work of five single ploughs, and in a superior manner. They deem this one of the most useful implements that has been offered to the notice of the public since the establishment of our society, and with pleasure award to Mr. Maxcy the second premium.

A machine, new to us, for shelling corn, was offered to our inspection by Mr. Joseph Winman, price $25. It is more complicated, and not so efficient as those made by Mr. R. Sinclair, which are very perfect and useful machines, but the price at which they are held we deem too high, and this probably is the only circumstance which prevents their coming into very general use.

A machine denominated a vertical spinner was offered to the notice of the Committee by Eastman and McCoy. It is a simple and very beautiful application of the machinery of the great Arkwright to spinning wool by hand. It can only, however, be used to spin rolls carded by machinery. The spinning requires very little skill. It runs 6 spindles, makes a uniform, even, and excellent yarn, and will accomplish with less labour from three to four times as much as one common wheel. It is about 6 feet high, and 3 feet square, price $20, and the number of spindles can be increased at about $1 a piece. We regret that we have not the power to confer a premium on this ingenious and simple machine, which we recommend to the notice of every family, who can have their wool properly carded.

SAML. M'CULLOH, *Chairman.*

REPORT ON THE PLOUGHING MATCHES.

The Committee appointed to superintend the ploughing matches, have the pleasure to report, that they have been highly gratified in attending to the duties devolved upon them, as they were thus led to witness the universal and acknowledged satisfaction which the emulation and dexterity of many skilful competitors, and the performance of some excellent ploughs, afforded to a crowd of admiring spectators, who remained upon the field enjoying the animated scene, until they were forced to seek shelter by the heavy fall of rain, that finally interrupted our operations, before we could test the draught of the respective ploughs with instruments provided for that purpose—a circumstance that we particularly regret, as we had determined to subject them all to this examination, which could alone authorise us to give a settled opinion upon their *entire* merits.

The Committee, nevertheless, believe it to be their duty to report upon the *seeming* value of the different ploughs, and to award the premiums offered by the Society to those which have *appeared* to be the best, so far as they have been enabled to form an opinion—a task that has been rendered the more difficult by the interruption of an important test, as the ploughing was generally executed in the most masterly style, and with a rapidity so great and nearly equal, as to surprize and gratify all spectators—facts which permit us to assure the Society that the ingenuity and enterprize of our mechanicians, and the zeal of our ploughmen continue to hold forth the most cheering prospect of valuable improvements in this department of our rural economy.

It was the wish of your Committee to have obtained the use of a piece of stiff sward, for the scene of their operations; and to have allotted one eighth part of an acre to each plough. We were obligingly accommodated, through the courtesy of John B. Morris, Esq. and the liberality of his tenant, Mr. Joseph W. Stone, at the nearest good spot—one that was in every respect suited to the purpose, except in its extent, which did not permit us to run the furrows more than ten rods long, nor to allow a greater breadth than one rod and a quarter to each competitor; so that in ploughing these twelve and a half square perches, an unusual loss of time was unavoidably occasioned by the great frequency of turning the ploughs. The soil on which they operated, although free from stones and other obstructions, is a compact, clayey loam—the surface was a tough sward, on which cattle had pastured for several years; yet, under these circumstances the competitors ploughed their several compartments, as will be fully detailed, at the rate of an acre, in less time than four hours, with horse teams; and at the same rate, in less time than five hours with ox teams, of one yoke: thus fairly rivaling, in Maryland, by this latter operation, the performances at Brighton, where "the working ox" has ever been a favorite, and of late is made their toasted champion—there a premium plough drawn by a yoke of oxen, governed by the ploughman, without a driver, required at the rate of nearly four and a half hours to turn an acre, in furrows sixteen rods long, which greater length of furrow saved quite one third of the time that was lost in our experiment by frequent turnings.

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[*] *He also stated that it had threshed 15½ bushels in a trial hour, and his belief that thro' a crop its practical operation would equal an average of 8 bushels per hour.*

But the most interesting fact that this display presented to the spectators, and fastened on the minds of your Committee, is the demonstration that it gave of the power of the ox, to compete on equal grounds with a more expensive animal. And who can estimate the saving that might be made, or, to speak more acceptably, the gain that might be realized to the agriculturists of Maryland, if they would substitute the hardy, cheap, and enduring ox, for the more delicate, costly, and perishable horse?

To your Committee, it has been repeatedly objected during these experiments, and by many observers, "that oxen cannot bear the heat of summer, nor travel well in winter," but we have in vain inquired, who has proved these axioms, and at the same time fed the ox, in hot weather, upon even one half of the suitable provender usually bestowed upon the horse? or, who has found them less efficient in winter, if so fed and shoed in time to save their feet from injury? Too many there are, we fear, who deny to these invaluable animals what our climate renders absolutely necessary to their comfort and usefulness, whilst nearly all of us lavish, at least, twice as much upon our horses, as would enable oxen to perform equal services. Let the sceptical doubt even their own fears, until they shall have tested the truth of our opinions by fair and actual experiments. To us, this subject appears to affect the interests of Maryland so deeply, that we are unwilling to pass it over, as we must, in the cursory manner of a hasty report, which will scarcely permit us to call your attention to the most important considerations, before the usual notice of those scenes from which they spring, is expected at our hands by the successful candidates for your applause. But ere we proceed to these details suffer us to express the hope that many of you will make the most critical investigations into the comparative merit, of the ox and horse, in rural labors:—array the price, power, disposition, trappings, wants and end of each fairly against the other, and we have no doubt that you will arrive at a correct and eminently beneficial decision.

PLOUGHING, BY THREE HORSES.

Five ploughs, each drawn by three horses, were entered, and of these the plough made and exhibited by Mr. William Brown, of Brookville, Montgomery county, Md. is, in our opinion, best entitled to your patronage. It turned the sod completely under, and in fifteen and a half minutes, made sixteen furrows, each ten poles long, collectively one and a quarter pole wide, and nearly seven inches deep. We, therefore, award the premium to Mr. Brown, for the best three horse plough, and the silver medal to his expert ploughman, Mr. James Frame, as an evidence of particular approbation. The Committee were also much pleased with the performance of a plough made and exhibited by Mr. Chenowith, of Baltimore. We regret that an unexpected difficulty prevented its starting before the others had finished, and that an accident made it impossible to time his work. The extensive use made of his ploughs is, we believe, but the just consequence of substantial workmanship, upon a good model.

The plough made and exhibited by Mr. Robert Sinclair, of Baltimore, also executed its work in a very satisfactory manner, and the Committee consider it an excellent implement—it ploughed on an average, more than seven inches deep, turned the sod perfectly under, and in eighteen and a half minutes, made sixteen furrows, that finished his allotted space. The Committee are also gratified in expressing the pleasure which they derived from the performance of an iron plough, made by Mr. Crawford, and politely exhibited by Lloyd N. Rogers, Esq. to the observation of the Society—it ploughed a division, in eighteen furrows, an average depth exceeding six inches, in seventeen and a half minutes. It appeared to be of light draught; and is in our opinion worthy of further examination.

Mr. Joseph T. Ford, of Baltimore, also exhibited a plough that was made at his extensive manufactory, it ploughed the allotted space in twenty minutes, an average depth of six inches at eighteen furrows.

PLOUGHING, BY TWO HORSES.

Five ploughs were started, each drawn by two horses, and the divisions in this match having been assigned as in the former case by lot—the Committee paid close attention to the work done by each implement, and they think that the plough exhibited by Mr. Jona. Eastman, guided by Mr. Whittimore, and made in Baltimore at the manufactory of Mr. Robert Sinclair, by that skilful mechanic, Mr. John Stewart, is entitled to the preference—we, therefore, award the premium for the best two horse plough to Mr. Jona. Eastman, and a silver medal to the ploughman, Mr. Whittimore. This plough appeared to perform its work with the least draught—it turned the sod perfectly down, and in sixteen and a half minutes, finished the allotted division, having made nineteen furrows, of an average depth exceeding five and a half inches.

Mr. Robert Sinclair's plough turned his land well, and finished in sixteen and three quarter minutes, having made eighteen furrows, at an average depth of five and a half inches.

Mr. Brown's turned seventeen furrows in fifteen minutes, an average depth of five and a balf inches, but left nearly one slice unploughed in his division.

Both of these ploughs are excellent implements, and we recommend them as worthy of patronage.

Mr. Gideon Davis entered a plough of simple but strong construction, that worked very well—in seventeen and a half minutes it turned his space, at twenty furrows, four and a half inches deep. The irons of this plough are formed to anticipate the changes or impress that use would finally occasion, and pieces of leather are judiciously placed between the mould board and the share to soften those destructive shocks which unperceived obstructions frequently give to cast iron shares—and by the successive removal of these slips of leather, the original angle, or dip of the *share* may be preserved as long as *this* will last.

Mr. Joseph T. Ford entered a plough, which in twenty-one and a half minutes, turned his space at twenty furrows, each being four and a half inches deep. In this match as in the former, Mr. Chenowith was unprepared to run his plough with the others, and on account of its high reputation, we regret that it was not subsequently in our power to subject it to trial.

Your Committee would here most respectfully suggest the propriety of devoting an entire, and the second day of future exhibitions exclusively to the ploughing matches, and the trial of machinery—by this arrangement you would give time enough to the several Committees to discharge their duties without depriving them of reasonable opportunities to enjoy and improve occasions which bring together so many interesting objects. We would also recommend that competitors in your ploughing matches, should be required to announce themselves hereafter, at least one week before the Show, because the selection and division of the ground renders some notice necessary, and one week will be found quite short enough.

This Committee having understood that your Trustees were anxious to get up ploughing matches, sustained by oxen; one of our number was persuaded, by the rest, to enter an ox team, and to invite an acquaintance to engage the rein also—both having agreed to our proposal, and performed the work; we will here close our report that the majority of the Committee may alone furnish the details of this match.

HENRY V. SOMERVILLE,
JOHN MARSH.
B. F. MACKALL,
J. W. M'CULLOCH,
Com'tee.

SUPPLEMENT—PLOUGHING BY OXEN.

Two ploughs, each drawn by one yoke of oxen, started at the same moment that the ploughing match by two horses began—and each of them had an equal quantity of similar surface to plough. One yoke entered by Mr. Thomas Stabler, of Montgomery county, himself ploughman, aided by a driver, ploughed the allotted space in eighteen and a half minutes, four and a half to five inches deep, making eighteen furrows. His oxen were exceedingly well trained to his command, but yet he used a driver in this operation—although it would not require much time to save him the expense of a driver, as a few lessons would teach his oxen to obey the voice; our farmers will do best who do not give even to these animals expensive habits. The other yoke was entered by Mr. John Marsh of Baltimore county, and was commanded entirely by the ploughman, master Henry Hunt. He completed a space in twenty three minutes, turning eighteen furrows, an average depth of more than six inches—nothing could surpass the performance of this yoke, controlled as it was, wholly by the voice of a youthful teamster, who turned the slice completely over, and drew his furrows most beautifully straight and equal, holding an excellent plough of wrought iron mouldbord that was made, as we understand, by Mr. Hinks, near to Ellicott's Mills. The spectators hovered about this team, charmed by the skill of the young ploughman and the powers of his obedient oxen. And the undersigned members of your Committee feel peculiar pleasure in awarding the first premium, which has been conferred in Maryland, upon "the working ox," to Mr. John Marsh of Baltimore county, and the silver medal to his ploughman, Henry Hunt—the Society having unanimously expressed its approbation of this use of oxen, by appropriating a premium and medal to this interesting match.

HENRY V. SOMERVILLE,
B. F. MACKALL,
J. W. M'CULLOH,
Com.

REPORT ON DOMESTIC MANUFACTURES.

The committee appointed to examine the Domestic Manufactures exhibited to this Society, have carefully inspected every article submitted to their notice, and they most respectfully report, that, although they have had occasion to regret in several instances, that there was but a single specimen exhibited, and that in other cases, none claimed the proffered patronage of the Society—still the excellent quality and useful character of the manufactures shown to us for premiums, gave to the company and your committee very great satisfaction, and ample proofs that much benefit may be produced by encouraging these displays of household and domestic industry.

For the premium on KERSEY, an article extensively made in this state, there was not a single claimant; although the Society had solicited the exhibition of that article, and offered a liberal bounty to the manufacturer of the best piece, that might be shown to us.

For the premium on FLANNEL, there was but one claimant—her specimen was well made, and of excellent wool—your committee take pleasure in awarding to Mrs. Ann Kennard, of Talbot county, a silver ladle for exhibiting this evidence of her skill and industry.

Of CASSINET, there was only one piece submitted, this was manufactured by Messrs. John Sykes & Son, of Baltimore, at the FRANKLIN MILLS in this county—it is a well finished substantial piece of goods, which they sell at 137½ cents per yard, and fully entitles these deserving manufacturers to the premium offered on this article. We were also gratified by the opportunity which these gentlemen gave to the members of the Sooiety, and our much respected visitors, of examining two beautiful pieces of seven-fourth's superfine BLUE CLOTH, sold at the low price of $5½ per yard, and two pieces of equally good three-fourth's blue CASSIMERE, at $2 per yard, together with a coarser, but excellent piece of five-fourth's GREY CLOTH, at the price of 175 cents per yard—all made at their prosperous manufactory.

Of CARPETING, two very good pieces were shown—one manufactured by Mrs Mary Ann Murray, of Anne Arundle county; the other by Mrs. Mary Rickets, of Cæcil county—both substantial and handsome carpets: Mrs. Murray's has the advantage in appearance, the colors being superior; but the committee have felt bound to award the premium to Mrs. Rickets, as they consider her carpet *really* the best fabric.

There were several HEARTH RUGS offered—one of splendid colours, beautiful figure, and very close texture, manufactured by Mrs. Mary Ann Denny, of Talbot county, to whom the committee unanimously award the premium: they, however, took great pleasure in repeatedly examining the handsome and excellent rugs that were exhibited as the manufactures of Miss Mitchell, and Mrs. Ann Reardon, of Easton, Md.

The premium is awarded to Mrs. T. H. Belt, of Baltimore county, for exhibiting a large and handsome COTTON COUNTERPANE, made by herself.

For your premium on SHIRTING, there was not any claimant.

Two specimens of TABLE LINEN, were submitted—one of very superior quality, and beautiful pattern, it had been used without any apparent injury, for many years, and was manufactured by Mrs. Ann Kennard, of Talbot county, to whom the premium is thankfully awarded.—But to Mrs. Henry Tilghman, of Chestertown, Kent county, the committee would also have given a premium most willingly, if two had been placed at their disposal for this article; because she also has made and exhibited a piece of very good table linen.

The premium for TOWELING remains unclaimed.

Several specimens of very fine knit WOOLLEN STOCKINGS were shown to us, but the best, in the opinion of the committee, were made by Miss Mary Ann Norwood, of Baltimore county, to whom the premium is awarded—we had nevertheless, to make a very strict examination between these stockings, and those which were knit by Mrs Wm. Copper of Kent county.

The only knit COTTON STOCKINGS exhibited were made by Miss Mary Ann Norwood, of Baltimore county, but as they are very superior, she well deserves the premium.

The committee award the premium on knit THREAD STOCKINGS, to Mrs. Wm. Copper, of Kent county, who offered a pair of very good quality to their notice. These stockings were accompanied by a hank of beautiful white thread, spun by Miss Phœbe Gale, of the same county, and who we believe might have successfully competed for a stated premium.

Your committee regret that not a single grass or straw HAT or BONNET was exhibited; and especially, as they are satisfied that many ladies of this state, have converted materials which every where abound, and are comparatively of so little value, into these costly and ornamental objects.

A piece of cotton SAIL CLOTH, of very extraordinary quality was shown to us—it was made by Messrs. Charles Crook, Jr. & Brother, at their factory in Baltimore—the committee think it richly entitles them to a premium. We have been informed that Maj. M'Kim's new and elegant schooner Yellot, fitted with sails of similar canvass, left Baltimore and reached the Capes of the Chesapeake in the short period of sixteen hours—and the committee beg leave to conclude this report by most respectfully proposing that a discretionary premium of the value of $10, be awarded by the Society to Messrs Charles Crook Jr. & Brothers, for exhibiting this specimen of their manufacture.

EDWARD LLOYD,
WM. H. LANSDALE,
HENRY V. SOMERVILLE,
J. W. McCULLOH,
} *Com'tee.*

N. B. A piece of domestic carpeting manufactured by Mrs. Wm. Hall and daughters, of Anne Arundel county, was exhibited, but too late to compete for the premium. The spinning and dyeing were done in the family. The carpet was worked with the needle, and made in a quilting frame. Much time had evidently been devoted to it, but this beautiful and durable evidence, of hours well spent, will long remain to recompense its worthy manufacturers.

REPORT ON CROPS.

The committee appointed to judge of crops, regret that there has been so little competition; indeed they may say, that there has been none. The only crop, for which a premium has been asked by more than one person is wheat—and although the committee has the most perfect confidence in the statement of Mr. Nimrod Owings, which represents that he had made 50 bushels to the acre, yet as that statement was not accompanied by the necessary vouchers, they do not feel themselves at liberty to act upon it. They therefore award the premium for the wheat crop, to Mr. John Mercer, of Anne Arundel county, for a crop of 616 bushels exclusive of gleanings, (estimated at 20 bushels,) from 22 acres 75 perches of land.

For the corn crop, to Mr. N. Underwood of Baltimore county, for a crop of 60 bushels and 2 quarts per acre, on ten acres.

For the carrot crop, to Mr. John Mercer, of Anne Arundel county, for a half acre of carrots, producing 277½ bushels.

For an acre of mangle wurtzel, also to John Mercer, producing 1376 bushels of clean roots.

The committee have received a very satisfactory account of a large crop of millet raised by D. Williamson Jr., Esq. of Baltimore county, on a small quantity of land—the produce was great, and although not so much as we have seen reported in other situations, still it was large enough to prove, that millet is a very productive and valuable crop: one that might be advantageously placed on our premium lists.

And in order to inform competitors as to the nature of the evidence, that your committee are permitted to receive, respecting the character and extent of crops per acre, we beg leave to submit the several statements that have been offered to us on this occasion—by which it will be seen, that the Society requires the testimony of disinterested persons—not because the members or your committee would hesitate to believe the mere statements of competitors, but that they are convinced that it is best to accompany their awards with a higher degree of evidence, such as may claim, and will command universal confidence.

On behalf of the committee.
B. W. HALL,
Chairman.

Informal statement of a wheat crop—it being unaccompanied by disinterested testimony.

I hereby certify that I had a plat of ground of twenty acres, seeded in wheat, on the 4th and 5th of October, 1822, at the rate of three bushels to one acre, as nearly as my seedsman could sow it, (the residue of my crop being two bushels seed to one acre.) That I had the said wheat reaped in July, 1823, from which I got 2170 dozen sheafs. The wheat was of superior quality, and from 187½ dozen sheaves (or 2250 sheaves) thrashed, I cleared up 87 bushels superior seed wheat, leaving out of account tail ends, or such as I deemed unfit for seed—and that thrashed was in no respect different from the rest of the crop—it was the opinion of all farmers who saw it growing, and after it was reaped, that 50 bushels per acre would be realized. The above is a correct and true estimate which gives a fraction more than 1000 bushels superior wheat from the 26,040 sheaves, 2170 shocks, of 12 sheaves each. A sample of the wheat is herewith handed. I had other fields part, say 30 or 40 acres, of which I think was not much inferior to the above statement. I have not had this wheat weighed, but I think it will weigh 62 to 65 lbs. per bushel. The wheat is between the white and blue stem, not so fair as white wheat, though a brighter straw than the blue stem wheat. This is the eighth crop I have cultivated of this sort of wheat, preferring it to any other I have seen, the famous Lawler not excepted. The ground was tended in corn in 1821, and ploughed in the fall; again in the spring, and then in September, prepared for a crop of timothy. The drought last summer deterred me from sowing grass seed, and I put it in wheat, sowed broad cast, and harrowed in by two harrowings cross ways—heavy two horse harrows, teeth six inches long. It may be remarked that the wheat I had seeded on the 3d, 4th and 5th day's (6th being Tuesday) of the month was decidedly better than that sown on the 1st, 2d 6h, 7th 8th, 9th, and 10th, when I finished. Although the weather was mild and seasonable, with moderate showers on the 9th and 10th, though not to prevent my seeding. I had one field of 50 acres of rye, which was seeded from the 3d to the 11th September, from which I reaped the heaviest crop that has been seen by the most experienced of our farmers. Mr. Joshua Dellaplane says, he never saw as good a field of rye; the yield was 1750 shocks, of 18 sheaves each. I have not thrashed any of it.

My crop of corn, though small, (60 acres) is very superior, and has been thought inferior to none in the state.

NIMROD OWINGS.

Fountain Rock, Fred'k Co. Md.
November 3, 1823.

Estimate.—2170 shocks of 12 sheaves each, is 26,040 sheaves, on 20 acres. Thrashed 2250 sheaves—gave 87 bushels, is an agregate of 1006 bushels and upwards.

Wheat Crop, by Mr. John Mercer—Certificates of survey and produce.

I hereby certify that I surveyed a field of stubble for Mr. John Mercer, and found it to contain twenty-two acres and seventy-five perches.

JOHN IGLEHART.

Cedar Park, October 28, 1823.

I hereby certify that there were 616 bushels of clean wheat measured by me from the above field, exclusive of what I estimate at 20 bushels, gleaned with the horse-rake, but which was not threshed or measured separately.

THOMAS LEETCH.

Corn Crop, by Mr. N. Underwood—certificate of survey and yield.

We do hereby certify, that we have examined a corn field of Mr. N. Underwood, at Orange Farm, Baltimore county—that having carefully measured the produce of one acre of said field, we have found that the said acre has this year produced 60 bushels and 2 quarts of very fine shelled corn, and that in our estimation, the produce per acre of the adjoining nine acres is as great as the produce of the said acre actually measured. This corn field is in drills 3½ feet apart, and the corn stalks two in a hill, are about 18 inches apart.

JOHN MURRAY,
JOHN STANDFORD.

Baltimore County, Nov. 4th, 1823.

Root Crops, by Mr. John Mercer—certificates of survey and produce.

I hereby certify, that I surveyed a piece of ground in mangel wurtzel, and another in carrots—the former of which contained one acre, and the latter one half of an acre.

JOHN IGLEHART.

Cedar Park, 28th October, 1823.

We hereby certify, that we attended the measuring of the above acre of mangel wurtzel for Mr. John Mercer, and found it to contain 1376 bushels of clean roots well heaped on the barrel, weighing 52,976 lbs. As the form of the ground was an exact parallelogram, and the growth as uniform as possible, we agreed to take every fifth row for 25 rows, to measure and weigh the whole quantity and take the average. Also the half acre of carrots, which we found to contain 277½ bushels.

ALEX. MURRAY,
MARTIN FENWICK,
JAMES CHESTON, Jr.

We, the subscribers, also selected 12 of the largest roots of the mangel wurtzel which weighed 127 lbs.

ALEX. J. MURRAY,
MARTIN FENWICK,
JAMES CHESTON, Jr.

Account of a crop of Millet raised by D. Williamson, Jr. Esq. of Baltimore County.

Having heard much of the value and productiveness of Millet, I was induced to make an accurate experiment to test its worth.

In the fall of 1822 I ploughed up a piece of ground that had been in grass for the last 44 years, turning the sod well under, the depth of 9 or 10 inches. In the spring, the ground was well manured on the surface, and harrowed in, after which it was lightly ploughed across, so as not to disturb the sod. On or about the 26th of May, one bushel of millet seed was sown, and harrowed in, which from the drought that succeeded, remained without any appearance of vegetation, till after the rains and damp growing weather late in June, when its growth was more rapid and astonishing than any thing I ever witnessed. It continued luxuriant, and grew, on an average, six feet high and as thick as it could stand on the ground; the heads measuring 9 a 12 inches in length. It was ripe on the 8th of August, but owing to the weather, and my other engagements, it was not cut till the 19th and 20th August, then tied into bundles. An accurate average, as to size, was taken of the bundles, and weighed, giving a product of 74 cwt. 1 qr. 7 lbs. from which there were threshed 48 bushels of good seed.

The yield would have been greater, had I been able to have cut it in proper time; it shattered and wasted much in the field. The ground on which this grew measures 24 perch. 5 feet, by 10 perch. 5 feet, which is a fraction more than one and a half acres. For the above statement, I refer you to the annexed certificate.

D. WILLIAMSON, Jr.

Lexington, Nov. 5, 1823.

I certify that the particulars as mentioned in the above statement are correct.

MARTIN THOMAS, *Manager*.

Nov. 5, 1823.

Baltimore county, 5th Nov. 1823.

I hereby certify that at the request of David Williamson, Jr., I measured, with a measurer's line, the piece of ground on which the crop of millet grew, as described by Mr. Williamson, in the annexed statement, and that it measured 24 perches 5 feet, by 10 perches 5 feet.

JAMES A. McCREERY.

REPORT ON BUTTER.

The Committee appointed to award the premiums for the best Butter, approached that duty with a proper sense of its delicacy. The inherent difficulty of the task was augmented by the number of the competitors, and the almost equal merit of the samples of butter that were offered. It gives the Committee pleasure to say that, with the exception perhaps of one parcel, the whole was so excellent as to make it almost impracticable to discriminate between the different degrees of its merit. It was not therefore until after long deliberation that the Committee determined to award the premiums as follows:

The first premium to John Schwartze, of Baltimore county.

The second premium to James C. Gittings, of Long Green, Baltimore county.

It was a subject of regret to the Committee, that two samples of very fine butter were rejected from examination, because not coming within the description of the rule which requires the quantity exhibited to be "not less than five pounds." This was the more to be regretted, because this butter, which was afterwards understood to be the product of the farms of Messrs. Geo. and Jas. Howard, is said to have been samples of the quantity of thirty pounds, of like quality.

Some of the butter which failed to receive the preference, was rejected because somewhat too salt, and some of it because not sufficiently worked. The butter to which the second premium is awarded was in this respect of an excellence worthy of imitation.

These circumstances it is thought proper now to mention, as it may enable the candidates for this premium, at future exhibitions, to avoid the repetition of the error or inadvertence, which in all probability deprived at least one of them of the premium on this occasion.

By order of the Committee,
J. GALES, Jr.

RERORT ON FERMENTED LIQUORS.

The Committee on fermented liquors, report—that various samples consisting of bottles of currant wine and cider, were presented for their inspection. They award that the wine contained in the bottle marked D. D. is the best; the paper which was affixed to the bottle being lost, the Committee is uninformed as to the name of the maker*—and we award the premium for the best cider to Dr. Samuel M'Culloh, which we think of very superior quality.

WILLIAM GIBSON,
D. MURRAY,
JOS. KENT.

Nov. 5th, 1823.

Baltimore, Nov. 6th, 1823.

Dear Sir,

I very much regret that the state of the weather, connected with that of my health, renders it unsafe for me to attend the cattle show to-day, for the purpose of delivering the address which I have prepared, at the request of the Trustees.

Please to express to them my sense of the distinction conferred on me by this request, and my hope that circumstances may be more favourable at the next meeting.

Thinking highly as I do of the benefits to be expected from this institution, I have seen its progress with great pleasure, and shall always be very happy to assist in promoting its success, by every mean in my power.

With great respect,
I have the honour to be, Dear Sir,
Your most obedient servant,
ROBT. G. HARPER.

GEN. RIDGELY.

Meredian Hill, Nov. 2d, 1823.

MY DEAR SIR,

It is a subject of sincere regret, that I have it not in my power to attend the Agricultural Exhibition, near Baltimore, agreeably to the invitation I have been honoured with, by the Trustees of the Maryland Agricultural Society; as the early departure of my Squadron from the United States, requires my immediate presence in Norfolk, where I shall arrive on the day that the meeting takes place; and the same reason will prevent my attending the meeting of the Delegates at Washington, in relation to the grand Union Canal.

The two subjects are such as are regarded by me with the most lively solicitude, and it heightens my regrets that I should be deprived both of the pleasure of a participation in the proceedings of their respective friends, and of the opportunity which occasions so acceptable, would afford me of shaking by the hand the many friends and acquaintances which they will bring together.

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* *It has since been ascertained that this wine was made by Mr. Hamilton.*

With sentiments of great respect,
Your obedient servant,
D. PORTER.

J. S. Skinner, Esq. *Cor. Sec. Md. Agricultural Soc'ty.*

The various premiums having been delivered by the president, according to the preceding reports—the Society dined together in the utmost harmony and cheerfulness, and finally separated with increased dispositions to persevere in the promotion of the objects of their association.

JAMES HOWARD,
Secretary.

Selections.

Method of tanning leather by the decoction of bark, &c.

In 1804 a patent was granted for an improved method of tanning hides: viz. by immersing them in the liquor in which oak bark had been boiled. According to this improvement, the patentees filled a boiler of copper (or any other metal that does not stain or colour the liquor) half full, with ground bark, and poured water upon it, up to the brim. The whole is then boiled for three hours, till the tanning principle is completely extracted. The liquor is then suffered to run off by a cock into pits, where it stands to cool. The hides are now put into the liquor, and *handled* frequently, by taking them out and putting them in again, because the liquor is too powerful for them to remain long at a time, in the first stages of tanning. They are then to be removed to fresh liquors, from time to time, as the old is weakened, until the operation is complete. By this method a greater quantity of the tanning principle is collected into a small compass; less bark is consumed; and there is a great saving of labour.

If leather is required with a whiter colour or bloom, a small quantity of the dust of bark is mixed with the liquor. By this method, hides that have been shaved in the baits may be better tanned in two or three weeks, and skins in ten or twelve days, than in the one case in nine months; and in the other in six months by the usual process.

Observations. Here, the great advantage is that derived from extracting the tanning principle, by meaos of boiling; as business to any extent may be carried on with about one tenth part of the capital employed on the old plan.

Besides bark, the patentees make use of oak chips, and oak saw-dust, they have succeeded with the common heath or heather; and they find that the bark of most trees that produce *hard wood* has a tanning principle in them; but above all, they recommend the young shoots from the roots of oaks, and the superfluous twigs or branches that may be lopt off, so as not to injure the trees. These when cut in proper season, may be chopped and ground, and boiled with bark, and will produce a stronger tanning liquor than bark from the trunks of trees that have a thick rind, which cannot be separated from the bark.

By onother patent in 1819, the art of tanning by decoction is still further improved. This patentee has proved that the trunk, roots, limbs, branches, and *leaves* of the oak, whether tree, pollard, coppice, or underwood, possess tanning properties in a sufficient quantity to be employed with advantage for tanning, by reducing them to chips or saw-dust, and then boiling and using them in the following way:

To tan calf, or other thin skins, put one hundred weight of the limbs or branches, chopped as above mentioned, into a copper containing about sixty gallons of water, and boil, till the water be reduced to from thirty five to forty gallons; draw off the decoction.

Now add to the same limbs or branches forty gallons of water, and again boil till the water be reduced to about twenty-five gallons. The liquor thus produced by the second boiling is used as a weak ooze, in the first process of immersing the calf-skins, after they come from the scouring beam. The decoction first produced, is then to be used in the same way.

To tan *hides*, take one hundred weight of the limbs or branches, three-quarters of a hundred weight of oak saw dust, (the sooner the latter is used after being made the better,) and one-quarter of a hundred weight of the root, boil in eighty gallons of water, till reduced to from fifty to sixty gallons. Draw off the decoction, and put it aside for use. To the materials left in the copper add sixty gallons of water, and again boil, till reduced to from thirty to thirty-five gallons. The liquor produced by this second boiling is to be employed in the first stage of tanning hides after they come from the beam; and afterwards the decoction first produced is to be employed. The skins and hides having undergone the before mentioned processes, add as much oak-bark or tan liquor, or both, to the respective decoctions, as is necessary to complete the tanning. The quantity of each will vary according to the strength of such decoctions; which strength will depend on the age and size of the tree, and other circumstances.

Conversion of sheep skins into leather.

Sheep skins which are used for a variety of purposes, such as gloves, book-covers, &c. and which when dyed, are converted into mock-morocco leather, are dressed as follows:—They are first to be soaked in water and *handled*, to separate all impurities, which may be scraped off by a blunt knife on a beam. They are then to be hung up in a close warm room to putrefy. This putrefaction loosens the wool, and causes the exudation of an oily and slimy matter, all which are to be removed by the knife. The skins are now to be steeped in *milk of lime*, to harden and thicken; here they remain for a month or six weeks, according to circumstances, and when taken out, they are to be smoothed on the fleshy side by a sharp knife. They are now to be steeped in a bath of bran and water, where they undergo a partial fermentation, and become thinner in their substance.

The skins, which are now called *pelts* are to be immersed in a solution of alum and common salt in water; in the proportion of 120 skins to 3 pounds of alum and 5 pounds of salt. They are to be much agitated in this compound saline bath, in order to become firm and tough. From this bath they are to be removed to another, composed of bran and water, where they remain until quite pliant by a slight fermentation. To give their upper surfaces a gloss, they are to be trodden in a wooden tub, with a solution of yolks of eggs in water, previously well beaten up. When this solution has become transparent, it is a proof that the skins have absorbed the glazing matter. The pelt may now be said to be converted into leather, which is to be drained from moisture, hung upon hooks in a warm apartment to dry, and smoothed over with warm hand-irons.

Observations. To prepare sheep leather for various elegant purposes, by dying; the skins, after being taken from the lime-bath, are to be immersed in another, composed of dog and pigeon dung dissolved by agitation in water: here they remain until the lime is separated, and until the skins have attained the state of *soft pliable pelt*. To dye this pelt *red*, the skins are to be washed and sewed into bags, and stuffed with clippings and shavings of leather, or any other convenient substance, and immersed with the *grain side outwards* in a bath of alum and cochineal of the temperature of 170° or 180° Fahr. where they are to be agitated until they are sufficiently dyed. Each bag is now to be transferred to a *sumach* bath, where they receive consistency and tenacity. From this bath it is customary to remove the skins, and to plunge them into a saffron one, to improve their colour.

To dye these skins *black*, the washed pelt is to be first immersed in the sumach bath, and then to be rubbed over on the grained side, by a stiff brush dipped in a solution of acetate, or pyrolignite of iron.

To give these skins the grain and polish of morocco leather, they are first oiled, and then rubbed on a firm board by a convex piece of solid glass, to which a handle is attached. The leather being now rendered more compact, is rubbed or pressed hard, by a sharply grooved boxwood instrument, shaped like the glass one just described.

Lamb and kid skins are dressed, tanned, and dyed in a similar manner.

Manufacture of real Morocco Leather.

Goat skins are to be cleansed, have their hair removed, and to be limed as in the beforementioned processes. They are then to undergo a partial fermentation by a bath of bran and water, and afterwards to be immersed in another bath of *white figs and water*, where they are to remain for five or six days. It is now necessary to dip them in a solution of salt and water, to fit them for dyeing. To communicate a *red* color, the alum and cochineal bath is to be used as for sheep-skins; for *black*, sumach, and iron liquor as before; and for *yellow*, the bath is to be composed of alum and the pomegranate bark.

The tanning, dressing, and graining are the same as for sheep skins.

* * *

Statement of Miss Julia Harrison's Grass Bonnet, which received the first premium at the New York Fair, October 1823, and was bought by Mr. John Leonard, at auction, for $100.

11 days in preparing and cutting the straw
48 days in braiding the same
34 days in sewing the same
120 yards of braid in the hat
288,000 times turned or handed in braiding
286,000 separate stiches in sewing, which is
2,400 stiches in each yard
65 rows around the front
7 inches in the front
9 2-7 braids to the inch
13 straws in the braid
2½ yards is a day's work at braiding
4 do do do do sewing

Directions for curing the Grass.

The grass for the above hat, known by the name of "Spear Grass," was cut on the 18th of June, while in a green state, the blow just dropping off—put in scalding water for five minutes; laid in the sun one day; scalded again in the same manner; laid in the sun and dew till it becomes perfectly dry, time about one week, taking care that no rain falls on it; then trim it; for this instance only the top joint was used; scald it in pearl ash water and soap suds five minutes; then smoked in brimstone till nearly dry; taken out and laid in the sun till perfectly dry, when it is fit for use.

N. B. Miss Harrison resides in North East, Dutchess county, N. Y.—*Evening Post.*

HORSE OINTMENT.

Into a clean pipkin, that holds about a quart, put the bigness of a pullet's egg, of yellow rosin; when it is melted over a middling fire, add the same quantity of bees wax; when that is melted, put in half a pound of hog's lard; when it is dissolved, put in two ounces of honey; when that is dissolved, put in half a pound of common turpentine—keep it gently boiling, and stirring with a stick all the time—when the turpentine is dissolved, put in two ounces of verdigrease, finely powdered, but before you put in the verdigrease, you must take off the pipkin, (else it will rise into the fire in a moment,) set it on again, and give it two or three stirrings, then strain it through a coarse sieve into a clean vessel for use, throw away the dregs. This is an extraordinary ointment for wound or bruise in flesh, or hoof, broken knees, galled backs, bites, cracked heels, mallenders, or when you cut a horse, to heal and keep the flies away, nothing takes fire out of a burn or scald so soon.

HORSE MEDICINE.

¼ oz. Crocus Metulorum
¼ oz. Phenegreck Seed
¼ oz. Salt Petre
¼ oz. Sulphur.

One dose, and excellent for a horse in any situation.

INFALLIBLE CURE FOR THE TOOTH ACHE.

¼ lb. best pale Peruvian bark finely powdered
1 pint old 4th proof French brandy
1 pint of rose water
1 pint pure water.

Mix, and after 24 hours it is fit for use.

For severe tooth ache, add ¼ more brandy in proportion to any given quantity of the above, which hold in the mouth 5 minutes.

The above will preserve the teeth and gums from disease, and cure when already diseased—It should be used every morning with a tooth brush.

INDIAN CORN.

It is remarked by our Farmers generally, since they began to "husk and loft" their corn, that there is a greater proportion of defective corn than usual; much greater, and all agree now that we can have too much rain, even in August, for Indian corn—The crop, thank God! is a good one, but not extraordinary.—*Easton Gazette.*

Editorial Correspondence.

Extract of a letter to the Editor, dated Beatie's Ford, Lincoln County, N. C.

"Will you inform me Sir, whether I can make "an arrangement with the patentees of different "kinds of improved ploughs, and other imple-"ments of farming, so as to have them made "for sale in this county? Also which are es-"teemed the best? We have several Iron "works, and a number of excellent mechanicks "in this county—and I think, could make such "implements well, and circulate them exten-"sively."

Patentees of ploughs interested in the above enquiry, would do well to address themselves by letter, to J. F. Brevard, Secretary of the Lincoln County Agricultural Society, Beattie's Ford, N. Carolina.—*Edit. Am. Far.*

* * *

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco Inspected at and delivered from Taylor's Landing Warehouse, during the quarter, commencing on the third day of July, in the year eighteen hundred and twenty-three, and ending the third day of October, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	49			49
Number delivered.	56			56

DAVID STEWART, Inspector.

TREASURY OFFICE, ANNAPOLIS, Nov. 13, 1823.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Upper Marlboro' Inspection Warehouse, during the quarter, commencing on the seventh day of July, in the year eighteen hundred and twenty-three, and ending on the seventh day of October in the year eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	454			454
Number delivered.	652			652

SCOTT & SASSCER, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Nov. 11, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md

THE FARMER.

BALTIMORE, FRIDAY, NOVEMBER 14, 1823.

☞ The proceedings of the Maryland Agricultural Society, have occupied in this number, much more space than we had anticipated—to the exclusion of many articles, which we could have wished to present to our readers this week. We have on hand, accounts of proceedings of the Agricultural Societies in Pennsylvania and Virginia—for the success of which, we feel on every account, the most friendly solicitude.—The first opportunity will be embraced to do justice to their zeal and usefulness.

* * *

☞ The next meeting of the trustees of the Maryland Agricultural Society, is appointed for Wednesday the 17th day of December, at "The Mount," the residence of James Carroll, Jr. Esq. on the Washington road—there will be much business of importance to engage their attention, and it is desired that the members attend punctually at ten o'clock, A. M.

* * *

☞ The young bull Pilgrim, now called Wye Comet, which gained the highest premium offered for a bull under two years old, was sold on the spot, by his liberal owner Col. Lloyd, for $250, to Col. J. H. Powell of Pennsylvania.—This, under all circumstances may be considered a very low price, as an animal of the like good blood and fine points cannot now be obtained from England, for less than $600—his sire was recently sold there by Mr. Champion, for 150 guineas.

☞ AN AGRICULTURAL SOCIETY has been formed in Lincoln county, N. C. which promises to be of great publick utility. The respectability and intelligence of its officers, as well as its objects, give assurance of such a result.—They consist of,

DANIEL M. FORNEY, *President,*
PETER HOYT, *1st Vice President,*
JOHN HOKE, *2d Vice President,*
JACOB FORNEY, *Treasurer,* and
J. F. BREVARD, *Secretary.*

Agency at Baltimore.

WILLIAM PORTER, No. 44, South-street, Baltimore, informs his friends, and the public generally, that he offers to transact business as agent to collect house and ground rents, annuities, open accounts, &c. also to settle and collect for deceased estates. He will attend promptly to any orders such persons may have, and generally in the performance of all duties or services wherein the aid of an agent may be convenient or useful. For a knowledge of the despatch and fidelity with which he has acted as agent, he confidently refers to all those for whom he has done business, and among them to Messrs. Gales and Seaton, of Washington City, Isaac Munroe, H. Niles, J. S. Skinner, (Postmaster) Esq'rs, of Baltimore, &c. &c.

N. B. All letters, by mail, post paid, will be attended to.

Office of the National Intelligencer,
Washington, June 30, 1823.

Mr. WM. PORTER has been our agent at Baltimore for three years, and has uniformly shewn himself vigilant of our interests, prompt, and faithful. We have pleasure in recommending him to our friends who have business to transact in Baltimore.

GALES & SEATON.

FOR SALE,

On the 29th of this month, at 2 o'clock, P. M. at the sign of the *Golden Horse,* kept by *William Frame,* the celebrated turf horse, YOUNG HICKORY; he is a dark bay, sixteen hands high, twelve years old, and of sufficient strength to carry the New York weight. He was sired by old Hickory, whose pedigree and performance is so well known that it is not necessary to mention much of it, with the exception that he beat Gen. Ridgley's horse Post Boy at the City of Washington, and was purchased by Bela Badger for $2500; young Hickory's dam, Yellow Diomede, was got by Diomede, who was a descendant of the old Eclipse of England. When two years and an half old, he was trained with the Durock by Bela Badger, and could always lead him; but he was obliged to put a man on him that was too heavy, and he sprained his shoulder, but has got completely well.—A further description will be given at the time of sale.

N. B. Any gentleman that would wish to see his speed tried before purchasing, that will furnish a fast horse, and a good rider for Hickory, shall be gratified, by way of proof, but not for wager, as I am not in that line of business.

JOSEPH KERSEY.

Downingtown, 11 *mo.* 17*th*, 1823.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore: where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

Internal Improvements.

We have found in this paper sufficient space to make record of Mr. Calhoun's valuable Report which has been some months on our files, of a plan for the application of such means as are within the power of Congress for the purpose of opening and constructing such roads and canals, as may deserve and require the aid of government, with a view to military operations in time of war; the transportation of munitions of war; and also, a statement of the works of the nature abovementioned, which have been commenced, the progress which has been made, and the means and prospect of their completion; and, together with such information, as in the opinion of the Secretary, shall be material in relation to the objects of the resolution.

It will be seen that this great question for national consideration, loses none of its intrinsic importance in the hands of Mr. C. His reflections on the means of accomplishment, and the advantages to be secured, are clearly and eloquently exposed, and the publick feeling in regard to internal improvements, is now in a condition to appreciate and take advantage of all the light that can be cast upon the subject.

To what extent the powers of the General Government are adequate to the execution of great publick works of this character, with or without the consent of the states most immediately interested, is still a matter of doubt and disputation. We propose, as we can find room, to insert a few of the leading arguments on both sides of the question; because, independently of the fact that "Internal Improvements" have always constituted a distinct and avowed portion of the plan of this Journal, it must be seen that every measure which facilitates in any degree the means of intercourse and transportation, must have, in itself, a direct bearing on the interests of agriculture, and the value of real property.—*Edit. Am. Far.*

Report of the Secretary of War, relative to Roads and Canals, in pursuance of a Resolution of the House of Representatives, of the 4th April last.

Department of War, January, 7th, 1819.

Sir,

In compliance with a resolution of the House of Representatives of the 4th of April, 1818, instructing the Secretary of War, to report to that House at their next session "a plan for the application of such means, as are within the power of Congress, for the purpose of opening and constructing such roads and canals, as may deserve and require the aid of government, with a view to military operations in time of war; the transportation of munitions of war; and also, a statement of the works of the nature abovementioned, which have been commenced, the progress which has been made, and the means and prospect of their completion; and, together with such information, as in the opinion of the Secretary, shall be material in relation to the objects of the resolution;" I have the honor to make the following

REPORT:

A judicious system of roads and canals, constructed for the convenience of commerce, and the transportation of the mail only, without any reference to military operations, is itself, among the most efficient means for "the more complete defence of the United States." Without adverting to the fact, that the roads and canals, which such a system would require, are, with few exceptions, precisely those, which would be required for the operations of war; such a system, by consolidating our Union, increasing our wealth and fiscal capacity, would add greatly to our resources in war. It is in a state of war, when a nation is compelled to put all of its resources in men, money, skill, and devotion to country into requisition, that its government realizes, in its security, the beneficial effects from a people made prosperous and happy by a wise direction of its resources in peace. But I forbear to pursue this subject, though so interesting, and which the farther it it is pursued, will the more clearly establish the intimate connexion between the defence and safety of the country, and its improvement and prosperity, as I do not conceive that it constitutes the immediate object of this report.

There is no country to which a good system of military roads and canals is more indispensable, than to the United States. As great as our military capacity is, when compared with the number of our people, yet when considered in relation to the vast extent of our country, it is very small; and if so great an extent of territory renders it very difficult to conquer us, as has frequently been observed, it ought not to be forgotten, that it renders it no less difficult for the government to afford protection to every portion of the community. In the very nature of things, the difficulty of protecting every part, so long as our population bears so small a proportion to the extent of the country, cannot be entirely overcome, but it may be very greatly diminished, by a good system of military roads and canals. The necessity of such a system is still more apparent, if we take into consideration the character of our political maxims and institutions. "Opposed in principle to a large standing army, our main reliance for defence, must be on the militia, to be called out frequently from a great distance, and under the pressure of an actual invasion. The experience of the late war, amply proves in the present state of our internal improvements, the delay, the uncertainty, the anxiety, and exhausting effects of such calls. The facts are too recent to require details, and the impression too deep to be soon forgotten." As it is the part of wisdom to profit by experience, so it is of the utmost importance to prevent a recurrence of a similar state of things, by the application of a portion of our means, to the construction of such roads and canals, as are required "with a view to military operations, in time of war, the transportation of the munitions of war, and more cumplete defence of the United States."

In all questions of military preparations, three of our frontiers require special attention; the eastern or Atlantic frontier; the northern, or the Canadian frontier, and the southern, or the frontier of the Gulf of Mexico. On the west and northwest, we are secure, except against Indian hostilities; and the only military preparations required in that quarter, are such as are necessary to keep the Indian tribes in awe, and to protect the frontier from their ravages. All of our great military efforts, growing out of a war with an European power, must for the present be directed towards our eastern, northern, or southern frontiers; and the roads and canals, which will enable the government to concentrate its means for defence, promptly and cheaply, on the vulnerable points of either of those frontiers, are those, which, in a military point of view, require the aid of the government. I propose to consider each of those frontiers separately, beginning with the Atlantic which in many respects is the weakest and most exposed.

From the mouth of the St. Croix, to that of the St. Mary's, the two extremes of this frontier, is a distance along the line of the coast and principal bays, without following their sinuosities, of about two thousand one hundred miles. On this line, including its navigable rivers and bays, are situated our most populous cities, the great depots of the wealth and commerce of the country. That portion of it, which extends to the south of the Chesapeake, has, with the exceptions of the cities and their immediate neighbourhood, a sparse population, with a low marshy country, extending back from 100 to 150 miles. To the north of the Chesapeake inclusive, it affords every where, deep and bold navigable bays and rivers, which readily admit vessels of any size. Against a line so long, so weak, so exposed, and presenting such strong motives for depredations, hostilities the most harassing and exhausting, may be carried on by a naval power, and should the subjugation of the country ever be attempted, it is probable that against this frontier facing Europe, the seat of the great powers of the world, the principal efforts would be turned. Thus circumstanced, it is the duty of the government to render it as secure as possible. "For much of this security, we ought to look to a navy, and a judicious and strong system of fortifications; but not to the neglect of such roads and canals, as will enable the government to concentrate promptly and cheaply, at any point, which may be menaced, the necessary force and means for defence."

To resist ordinary hostilities, having for their object the destruction of our towns, and the exhaustion of our means, the force ought to be drawn from the country lying between the coast and the sources of the principal rivers, which discharge through it into the ocean; but to resist greater efforts, aiming at conquest, should it ever be attempted, the force and resources of the whole community, must be brought into resistance. To concentrate then, a sufficient force on any point of this frontier, which may be invaded, troops must be marched, and munitions of war transported, either along the line of the coast, or from the interior of the Atlantic states, to the coast; or should the invading force be of such magnitude, as to require it, from the western states; and the roads and canals necessary for the defence of this frontier, are those which will render these operations prompt, certain, and economical.

From the coast to the Alleghany mountains and the high land separating the streams which enter into the St. Lawrence, from those of the Atlantic, in which the principal Atlantic rivers take their rise, the distance may be averaged at about 250 miles: and the whole extent from the St. Marys to the St. Croix, is intersected, at short intervals, by large navigable rivers, and the principal roads of this portion of our country, through which its great commercial operations are carried on. These, aided by the steam boats, now introduced on almost all of our great rivers, present great facilities to collect the militia from the interior; and to transport the necessary supplies and munitions of war.

Much undoubtedly remains to be done to perfect the roads and improve the navigation of the rivers, but this for the most part, may be safely left to the states, and the commercial cities particularly interested, as the appropriate objects of their care and exertions. The attention of both have recently been much turned towards these objects, and a few years will probably add much to facilitate the intercourse between the coast and the interior of the Atlantic states. Very different is the cause with the great and important line of communication extending along the coast, through the Atlantic states.

No object of the kind is more important; and there is none to which state, or individual capacity, is more inadequate. It must be perfected by the general government, or not to be perfected at all, at least for many years. No one or two states have a sufficient interest. It is immediately beneficial to more than half of the states of the Union, and without the aid of the general government, would require their co operations. It is at all times, a most important object to the nation; and, in a war with a naval power, is almost indispensable to our military, commercial, and financial operations. It may, in a single view, be considered the great artery of the country; and when the coasting trade is suspended by war, the vast intercourse between the north and south, which annually requires five hundred thousand tons of shipping, and which is necessary to the commerce, the agriculture and manufacture of more than half of the union, seeks this channel of communication. If it were thoroughly opened by land and water; "if Louisiana were connected by a durable and well finished road with Maine; and Boston with Savannah, by a well established line of inland navigation, for which so many facilities are presented, more than half of the pressure of war would be removed." A country so vast in its means, and abounding in its various latitudes with almost all of the products of the globe, is a world of itself; and with that facility of intercourse, to perfect which, the disposable means of the country is adequate, would flourish and prosper under the pressure of war with any power. But dropping this more elevated view, and considering the subject only as it regards "military operations in time of war, and the transportation of the munitions of war," what could contribute so much as this communication to the effectual and cheap defence of our Atlantic frontier? Take the line of inland navigation along the coast, the whole of which it is estimated, could be completed for sea vessels by digging one hundred miles, and at the expense of $3.000,000, the advantage which an enemy with a naval force now has, by rapidly moving along the coast, and harassing and exhausting the country, would be in a great measure lost to him. In fact, the capacity for rapid and prompt movements and concentration, would be to the full, as much in our power. We would have, in most of the points of attack, a shorter line to move over, in order to concentrate our means; and, aided by steam boats, would have the capacity to pass it in a shorter time, and with greater certainty, than what an enemy, even with a naval superiority, would have, to attack us. Suppose the fleet of such an enemy should appear off the capes of Delaware, before it could possibly approach and attack Philadelphia, information by telegraphic communication, might be given to Baltimore and New York, and the forces stationed there thrown in for its relief. The same might take place if Baltimore or New York should be invaded; and should an attack be made on any of our cities, the militia and regular forces at a great distance along the coast, could, in a short time, be thrown in for its relief. By this speedy communication, the regular forces, with the militia of the cities and their neighbourhood, would be sufficient to repel ordinary invasions, and would either prevent, or greatly diminish, the harassing calls upon the militia of the interior. If to these considerations we add the character of the climate of the southern position of the Atlantic frontier, so fatal to those whose constitutions are not inured to it, the value of this system of defence, by the regular troops and the militia accustomed to the climate, will be greatly enhanced. Should this line of inland navigation be constructed, to enjoy its benefits fully, it will be necessary to cover it against the naval operations of an enemy. It is thought that this may be easily effected to the south of the Chesapeake, by land and steam batteries. That bay is itself one of the most important links in this line of communication, and its defence against a naval force ought, if practicable, to be rendered complete. It was carefully surveyed the last summer by skillful officers, for this purpose in part, and it is expected that their report will throw much light upon this important subject. Long Island Sound, another part of the line which is exposed, can be fully defended by a naval force only.

It remains in relation to the defence of the Atlantic frontier, to consider the means of communication between it and the western states, which require the aid of the government. Most of the observations made relative to the increased strength and capacity of the country, to bear up under the pressure of war, from the coastwise communication, are applicable in a high degree at present, and are daily becoming more so, to those with the western states; and should a war for conquest ever be waged against us, an event not probable, but to be laid entirely out of view, the roads and canals necessary to complete the communication with that portion of our country, would be of the utmost importance.

The interest of commerce and the spirit of rivalry between the great Atlantic cities, will do much to perfect the means of intercourse with the west. The most important lines of communication appear to be from Albany to the lakes, from Philadelphia, Baltimore, Washington, and Richmond, to the Ohio river, and from Charleston and Augusta, to the Tennessee, all of which are now commanding the attention, in a greater or less degree, of the sections of the country immediately interested. But in such great undertakings, so interesting in every point of view to the whole union, and which may ultimately become necessary to its defence, the expense ought not to fall wholly on the portions of the country more immediately interested. As the government has a deep stake in them, and as the system of defence will not be perfect without their completion, it ought at least to bear a proportional share of the expense of their construction.

I proceed next to consider the roads and canals connected with the defence of our northern frontier. That portion of it which extends to the east of lake Champlain, has not heretofore been the scene of extensive military operations, and I am not sufficiently acquainted with the nature of the country, to venture an opinion whether we may hereafter be called on to make considerable military efforts in that quarter. Without, then, designating any military improvements as connected with this portion of our northern frontier, I would suggest the propriety, should Congress approve of the plan, for a military survey of the country to be hereafter proposed to make a survey of it the duty of the engineers, who may be designated for that purpose.

For the defence of the other part of this line of frontier, the most important objects are, a canal or water communication between Albany and lake George, and lake Ontario, and between Pittsburg and lake Erie. The two former have been commenced by the state of New York, and will, when completed, connected with the great inland navigation along the coast, enable the government, at a moderate expense and in a short time, to transport munitions of war, and to concentrate its troops from any portion of the Atlantic states, fresh and unexhausted by the fatigue of marching on the inland frontier of the state of New York. The road commenced by order of the executive from Plattsburg to Sackett's Harbor, is essentially connected with military operations on this portion of the northern frontier. A water communication from Pittsburg to lake Erie, would greatly increase our power on the upper lakes. The Alleghany river, by its main branch, is said to be navigable within seven miles of lake Erie, and by French Creek, within sixteen miles. Pittsburg is the great military depot of the country to the west of the Alleghany, and if it were connected by a canal with lakeErie, would furnish military supplies with facility to the upper lakes, as well as to the country watered by the Missisippi. If to these communications, we add, a road from Detroit to Ohio, which has already been commenced, and a canal from the Illinois river to lake Michigan, which the growing population of the state of Illinois renders very important, all of the facilities which would be essential "to carry on military operations in time of war, and the transportation of the munitious of war" for the defence of the western portion of our northern frontier would be afforded.

It only remains to consider the system of roads and canals connected with the defence of our southern frontier, or that on the Gulf of Mexico. For the defence of this portion of our country, though at present weak of itself, nature has done much. The bay of Mobile, and the entrance into the Mississippi through all of its channels, are highly capable of defence. A military survey has been made, and the necessary fortifications have been commenced and will be in a few years completed. But the real strength of this frontier is the Mississippi, which is no less the cause of its security, than that of its commerce and wealth. Its rapid stream, aided by the force of steam, can, in the hour of danger, concentrate at once, an irresistable force. Made strong by this noble river, little remains to be done by roads and canals, for the defence of our southern frontier. The continuation of the road along the Atlantic coast, from Milledgeville to New Orleans, and the completion of the road which has already been commenced from Tennessee river to the same place, with the inland navigation through the canal of Carondelet, lake Ponchartrain, and the islands along the coast to Mobile, covered against the operations of a naval force, every facility required for the transportation of munitions of war, and movements and concentration of troops, to protect this distant and important frontier, would be afforded.

Such are the roads and canals, which military operations in time of war, the transportation of the munitions of war, and the more complete defence of the United States, require.

Many of the roads and canals which have been suggested, are no doubt of the first importance to the commerce, the manufacture, the agriculture, and political prosperity of the country, but are not for that reason, less useful or necessary for military purposes. It is in fact, one of the great advantages of our country, enjoying so many others, that whether we regard its internal improvements in relation to military, civil, or political purposes, very nearly the same system, in all its parts, is required. The road or canal can scarcely be designated, which is highly useful for military operations, which is not equally required for the industry or political prosperity of the community. If those roads or canals had been pointed out, which are necessary for military purposes only, the list would have been small indeed. I have, therefore, presented all, without regarding the fact, that they might be employed for other uses, which, in the event of war, would be necessary to give economy, certainty, and success, to our military operations; and which, if they had been completed before the late war, would, by their saving in that single contest, in men, money, and reputation, more than indemnified the country for the expense of their construction. I have not prepared an estimate of expenses, nor pointed out the particular routes for the roads or canals recommended, as I conceive that this can be ascertained with satisfaction only by able and skilful engineers, after a careful survey and examination.

I would, therefore, respectfully suggest, as the *basis* of the system, and the first measure in the "plan for the application of such means as are in the power of Congress," that Congress should direct such a survey and estimate to be made, and the result to be laid before them as soon as practicable. The expense would be inconsiderable, for, as the army can furnish able military and topographical engineers, it would be principally confined to the employment of one or more skilful civil engineers to be associated with them. By their combined skill, an efficient system of military roads and canals would be presented in detail, accompanied with such estimates of expenses, as may be relied on.—Thus, full and satisfactory information would be had; and though some time might be lost in the commencement of the system, it would be more than compensated by its assured efficiency when completed.

For the construction of the roads and canals, which Congress may choose to direct, the army, to a certain extent, may be brought in aid of the monied resources of the country. The propriety of employing the army on works of public utility cannot be doubted. Labour adds to its usefulness and health. A mere garrison life, is equally hostile to its vigor and discipline. Both officers and men become the subjects of its deleterious effects. But when the vast extent of our country is compared with the extent of our military establishment, and taking into consideration the necessity of employing the soldiers on fortifications, barracks, and roads, connected with remote frontier posts, we ought not to be sanguine in the expectation of aid to be derived from the army in the construction of permanent military roads and canals, at a distance from the frontiers. When our military posts come to be extended up the Mississippi and Missouri, as far as is contemplated, the military frontier of the United States, not including sinuosities, and the coasts of navigable bays and lakes opening into our country, as was stated in a former report, will present a line of more than 9,000 miles, including them, of more than 11,000. Thinly scattered along so extensive a frontier, it will be impossible, I fear, without leaving some points exposed to collect any considerable bodies in the interior of the country, to construct roads and canals.

As connected with this subject, I would respectfully suggest the propriety of making an adequate provision for the soldiers, while regularly and continually employed in constructing works of public utility. The present allowance is fifteen cents a day, which is considered sufficient in occasional fatigue duty, such as is now done at most of the posts; but if systematic employ, on permanent works, should be made the regular duty of the soldiers, who can be spared for that purpose, a compensation, taking into the estimate the obligation of the government to provide medical attendance and pensions to the diseased and disabled soldiers, not much short of the wages of daily labour ought to be granted to them. Without such provision, which is dictated by justice, an increase of desertion and difficulty in obtaining recruits, ought to be expected. Among the leading inducements to enlist, is the exemption from labor; and if the life of a soldier should be equally subjected to it, as that of other citizens in the same grade, he will prefer, if the wages are much inferior, to labor for himself, to that of laboring for the public. The pay of a soldier is sixty dollars per annum; and if he were allowed, when employed permanently on fatigue, 25 cents a day, and suppose him to be employed 200 days in the year, his compensation, including his pay, would be $110 per annum, a sum, it is thought, considerably short of the average wages of labor. If this sum should be allowed, the greater portion of it ought to be paid at the expiration of the term of enlistment. If fifteen cents a day were so reserved, and the soldier should be employed one thousand days in the five years for which he is enlisted, it would constitute a sum of one hundred and fifty dollars, to be paid at the expiration of his term, which ought, in the same manner as the bounty land, be made to depend on an honorable discharge. This would furnish an important hold on the fidelity of the soldier, and would be a powerful check to the great and growing crime of desertion. An honourable discharge is now worth but little to the soldier, and the consequence is, that desertions are more frequent with those enlisted since the war, than those who were then enlisted, and are entitled to the bounty in land on their honourable discharge The latter patiently waits the expiration of his term of service, while the former frequently seizes the first favourable opportunity for desertion.

Should Congress think proper to commence a system of roads and canals for the "more complete defence of the United States," the disbursements of the sums appropriated for the purpose might be made by the Department of War, under direction of the President. Where incorporate companies are already formed, or the road or canal commenced under the superintendence of a state, it perhaps would be advisable to direct a subscription on the part of the United States, on such terms and conditions as might be thought proper. In other cases, and where the army cannot be made to execute it, the work ought to be done by contract under the superintendence and inspection of officers of the engineer corps to be detailed for that purpose. It is thus the government will be able, it is thought, to construct on terms at least as favorable as corporate companies. The system of constructing all public works, which admit of it, by contract, would be attended with important advantages.—It has recently been adopted in the construction of fortifications, and it is expected will be attended with beneficial effects. The principal works at Mobile and New Orleans have been contracted for on terms considerably under the estimates of the engineers. With such a system extended to military roads and canals, combined with a careful inspection and superintendence by skilful engineers, will enable the government to complete them with economy, durability, and despatch.

In the view which has been taken, I have thought it improper under the resolution of the House, to discuss the constitutional question, or how far the system of internal improvements which has been presented, may be carried into effect, on the principles of our government; and, therefore, the whole of the arguments which are used, and the measures proposed, must be considered as depending on the decision of that question.

The only military roads which have been commenced, are from Plattsburg to Sackett's Harbor, through the Chataugay country; from the southern boundary of the state of Tennessee, and crossing the Tennessee river near the Muscle Shoals, to Madisonville, Louisiana; and from Detroit to fort Meigs, at the foot of the Rapids of the Miami of the Lakes. Documents marked A, B, C, show the progress which have been made. These roads have been commenced, and thus far completed, by the labor of the soldiers, who, while they are so employed, receive fifteen cents per day, with an extra allowance of a gill of whiskey. The labor of the troops is the only means within the reach of the Department of completing these roads; and as the troops are so employed, only when they are not engaged in active service, it is impossible to state, with accuracy, when the roads will be completed.

J. C. CALHOUN.

The Hon. HENRY CLAY,
Speaker of the House of Representatives.

AGRICULTURE.

EXTRACTS

FROM MORE MODERN WRITERS ON THE USE OF SALT IN AGRICULTURE.—No. IV.

A letter from a very considerable North American planter to the Editor of the Museum Rusticum, *respecting the great benefit of salt to cattle, with the method of using it.*

GENTLEMEN,

I do not find that the farmers in England know the great advantages which may be derived from the use of salt in the business of fattening cattle; whereas, in America, we think it in a manner absolutely necessary, and accordingly give it to almost every kind of cattle; and those with parted hoofs are particularly fond of it.

Horses are as fond of salt as black cattle; for with us, if they are ever so wild, they will be much sooner brought to a handful of salt than any kind of corn whatever. We also give salt to our sheep. To this practice of feeding with salt, it is generally ascribed, that the American cattle in general are so much more healthy than the same animals in England: certain it is, that they are there subject to much fewer diseases. There is one very advantageous practice we have, which I cannot enough recommend to the notice of the farmers here in England: it is mixing salt with our hay-ricks when we stack it, which we call *brining*.

Just before I left America, I had a crop of hay, which was in a manner spoiled by rain, being almost rotted in the fields; yet did this hay spend as well as if it had been got in ever so favourably. When my servants were making up the stack, I had it managed in the following manner: that is, as soon as a bed of hay was laid about six inches thick, I had the whole sprinkled over with salt; then another bed of hay was laid, which was again sprinkled in like manner; and this method was followed till all the hay was stacked.

When the season came for cutting this hay, and giving it to my cattle, I found that so far from refusing it, they ate it with surprising appetite, always preferring it before the sweetest hay, that had not in this manner been sprinkled with salt. I have, in North America, some very considerable plantations; but having been for some time in England, I dedicate all my leisure hours to the study of agriculture, and have regularly, since the first publication, taken in the numbers of the *Museum Rusticum*, with which I cannot but in justice declare myself perfectly well satisfied; aud am of opinion it will be of great service, not in England only, but in America also.

I am, Gentlemen,
Your constant reader,
AMERICANUS.

London, May the 14th, 1764.

From the *Museum Rusticum et Commerciale*, LONDON, 1764.

"After draining a piece of sour rushy ground, about the middle of October, some refuse salt was spread upon a part of the land, after the rate of eight bushels to the acre, and in another part sixteen bushels. In a short time the vegetation disappeared totally; and during the month of April following, not a blade of grass was to be seen. In the latter end of the month of May, a most flourishing crop of rich grass made its appearance on that part where the eight bushels had been laid. In the month of July, the other portion produced a still stronger crop; the cattle were remarkably fond of it, and during the whole ensuing winter, (which is ten or twelve years since) and to this day, the land retained, and yet exhibits, a superior verdure to the neighbouring closes.

"A gentleman lately carried a small quantity of couch-grass roots and other rubbish harrowed off his land to the Salt Works, and laid it for some time upon the ground, where the foul salt, by the direction of the officer, is destroyed; he then carried it back, and mixed it with other manure. His barley and his hay-grass were strong from this composition, beyond his most sanguine expectations.

"Its effects on fallow-land are equally advantageous. By sewing it at the time of breaking up the lands for a fallow, its strong saline quality destroys vegetation and every noxious insect: but by being mixed sufficiently with the soil before the wheat is sown, it adds a strong nutriment, and ensures the best of crops." Dr. Holland's *Agricultural survey of the county of Cheshire*.

The following impressive expostulation is said to be from the pen of the Right Honorable Lord Erskine.

"The science of agriculture is by no means at its height; and in the almost miraculous advance of chemistry, new means may be found from the concentration of known composts, and the discovery of new, to lessen the cost of culture, and to increase its returns. But here again, your revenue stalks like a ghost across my path which ever way I turn; as otherwise you have a superior unbounded source of improvement trodden under your very feet, and cast as refuse into your rivers, beyond all that chemistry is ever likely to discover. You have SALT in endless abundance, but your *necessity* turns it into *money*, even to forty times its value, instead of spreading it abroad for various uses to rise up in property which no money could purchase.

"Do you know what salt alone would do for you? Can you be so ignorant as not to know, that by taking the tax upon it *directly as money*, you rob yourselves of fifty times its amount in the production of your soil, in your fisheries and manufactures, and in the universal prosperity of the country?

"Lime, which has caused to start into life the most inert and sterile parts of Great Britain, is just nothing as a manure when compared with SALT, which differs from it besides in two remarkable qualities decisive of its superior value.

"Lime, and I believe all other known composts, are powerful only according to the quantities in which they are used; whereas salt to be useful must be sparingly applied; it *corrupts* vegetable substances when mixed with them in *small* quantities, but *preserves* them when it *predominates in a mass*. It is needless, therefore, to add, that, independently of its comparative lightness, the expense both of the article and its carriage must be very greatly diminished. Yet you rob the mother of your people of this food which indulgent nature has cast into her lap, sufficient, as you will see hereafter, to feed all her children, even if their numbers were doubled." *Armata*, part i. page 169.

"Salt answers best as a manure for green crops, especially for turnips and clover. It is not of much benefit to barley or wheat, if sown; but in compost it proves very advantageous; using thirty Cornish or forty-five Winchester bushels per Cornish acre, which is larger than the statute acre, nearly in the ratio of six to five. Prepare the ground for turnips, and sow the salt a fortnight before the seed, or longer, if a larger quantity of salt is used.

Mr. Seckler, at Henver, in the parish of Gwinear, has just applied salt in the above proportion to poor exhausted land; being clay, inimical to turnips: the effect has been a heavy, rich crop, which I have had an opportunity of seeing. It is such a one as a hundred tons of dung per acre would scarcely produce in the same land. The salt employed is that which is considered refuse, after having cured the fish, and been condemned by the excise. Over this they throw some dirt, and it is then sold to the farmers by the fish curers. If the duty were taken off salt, for every bushel now used, there would be at least a hundred bushels employed for this purpose. It has been said that the value of refuse salt, as manure, depends upon the soil and animal matter which adheres to it; but the farmer knows from experience, that salt is to be preferred which has cured only one bulk of fish; and they give a higher price for it than for that which has been twice employed, and which consequently contains more animal matter. Where an estate has been salted for two or three crops, the effects are visible for at least seven years. It has a particular tendency to convert poor and light soils into firm and adhesive ones, 'giving them body.' Among the farmers there is a general scramble for the refuse salt, to try who can get most of it by purchase.

The following curious anecdote may be related as serving to illustrate the effect of salt: Mr. Seckler made a little heap of earth in the midst of a field, on the top of which a cart load of refuse salt was thrown; the earth in the heap itself, and (after its removal) the earth under it, for upwards of two feet deep to the clay, was rendered so perfectly barren, that the most common weeds would not vegetate in it. This barren earth, however, furnished the richest dressing for the remainder of the field. Mr. Seckler found salt the best preservative against the mildew in wheat. When the wheat followed turnips with salt, it escaped the mildew which attacked other fields which were not salted; and this he finds to hold universally good, as far as his experience goes. The improvement of bad hay, by salt applied in the proportion of about one hundred weight* to three tons, and sprinkled between the layers, is very striking, preventing mildew, and rendering it more grateful and beneficial to cattle, especially if the hay is bad; and even in good hay it is very greatly ameliorated. A testimony in favour of the benefit of salt is furnished by the striking fertility of the land in the neighbourhood of the sea-shore in Cornwall; more especially in those situations which are favourable to the general distribution of the saline spray, as is exemplified in the parish of Fennor." Sir Thomas Bernard's *case of the Salt Duties*, page 272, *communicated by Dr. Paris, late of Penzance*, but now of Dover Street, London.

"Notwithstanding the excessive duty, numerous experiments have been made, and almost invariably with uniform success. An interesting detail from the Rev. E. Cartwright will be found in the fourth volume of communications to the Board of Agriculture, which is conclusive, as to the application of salt as a manure for potatoes. It appears from this communication, that the experiment could not have been tried on a soil better adapted to give impartial results. Of ten different manures which were resorted to, most of them of known and acknowledged efficacy, one only excepted, *salt* was superior to them all. Its effects, when combined with soot, were extraordinary, yielding in a row two hundred and forty potatoes, whilst one hundred and fifty only were produced from the row manured with lime. It was observable also, where salt was applied, whether by itself or in combination, the roots were free from that scabbiness which often infects potatoes, and from which none of the other beds (and there were in the field near forty more than made part of the experiments) were altogether exempt. And in Dr. Holland's Agricultural Survey of the county of Chester are clearly shown the good effects resulting from its use on grass lands, and as a manure for wheat and barley. In the twenty-seventh volume of the Annals of Agriculture, there is a communication from Davies Giddy, Esq of some interesting experiments on the use of salt in the culture of turnips; by which it appears, that on a part of a field, which had been previously exhausted, half a crop of turnips was produced; but the crop totally failed in that part of the field where the ordinary manure was laid *without* salt. In another instance, three acres of land, which on the preceding year had borne a crop of wheat, not exceeding twelve bushels on an acre, were ploughed before Christmas, and brought into fine tilth by the midsummer following. On each acre were sown twenty bushels of salt, excepting that two ridges towards the middle of the field were purposely left without it; on these two ridges the turnips totally failed; but the remainder of the field produced a plentiful crop. It is farther instanced, that four acres of land, completely worn out by successive tillage, were ploughed before Christmas; three acres were sown with salt, at the rate of twenty-five bushels, and the remaining acre with eighteen bushels, without any other manure; the crop was in general a good one, but was visibly the best where the greatest quantity of salt had been used. Crops of turnips were subsequently raised with equal success; and in the severe winter of 1794 5, it was much less injured by the frost than others similarly treated and cultivated in the common way."—*Letter to the Right Hon. Nicholas Vunsittart*, by *William Horne, Esq.*—page 7.

(To be continued.)

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* This is foul fishery salt; of pure salt, a third of the quantity might be sufficient.

* * *

FOR THE AMERICAN FARMER.

MR. SKINNER,

Various lucubrations have occasionally appeared in your valuable paper, on the subject of a modification of the Tariff; in which it is unfortunately considered merely as a manufacturing question. It is impossible to conceive of a much greater error. The languor and depression which pervade our country, almost universally owe their origin to this error: And until our statesmen regard it as a national question, as it truly is, and as it is regarded by all the wise statesmen of the old world, we shall never taste that high degree of prosperity, to which our immense natural, moral, and political advantages authorise us to aspire.

I send you three chapters of an unpublished work, in which the pernicious effects of our policy on the agriculture is discussed. Your insertion of them will oblige, HAMILTON.

FARMING.

It was supposed, and very rationally, that the conversion of so large a portion of the armies of Europe, those *fruges consumere nati*, from the dreadful occupation of havoc and destruction, to the employment of civil life, in which husbandry must naturally partake largely, would create a superabundance of the fruits of the earth, immediately after the close of the war. The expectation was not realized.

England had at one time 400,000 men in pay—France, above 600,000—Russia, 600,000—Germany, and the rest of Europe, 800,000. Of these, not less than 800,000 were probably disbanded in 1815, or early in 1816. Notwithstanding the additions hereby made to agricultural labor, the crops so completely failed in Europe in the year 1816, that there was a full demand for all the surplus bread stuffs we could spare; which therefore bore very high prices. The British ports were open for our flour till November 1817. This staple averaged, in the United States, according to the treasury returns, in 1815, nine dollars—in 1816, ten—in 1817, twelve—and in 1818, ten. Hence the farmers, during these years, in a great degree, escaped the effects of the destruction of so large a portion of the national industry. But times soon changed.

In 1819 the export of flour was 750,660 barrels, which were rated, in the treasury returns, at eight dollars, and produced 6,005,280 dollars. The export in 1820 increased to 1,177,036 barrels, of which the price fell to four dollars and fifty cents. The total value was only 5,296,662 dollars. Had the manufacturers, who were driven from their workshops, and obliged to occupy themselves with the plough and the harrow, and thus become rivals of the farmers, instead of customers, remained at their original occupations, the exportation of flour, in 1820, would not have exceeded that of the preceding year; and of course the reduction would probably have been prevented altogether, or in a great measure. This is a practical commentary on the policy of buying abroad, what can be had cheaper than at home, and thus stinting and starving manufacturers. A farmer possibly saved eight or ten dollars per annum by buying foreign goods instead of American;* but, in return, lost half or three quarters of a dollar per bushel on 500, 750, or 1000 bushels of wheat! Liberality, like honesty, is the best policy. This is a most important point, and demands the most serious consideration of our statesmen and agriculturists. Of the number of manufacturers divested of employment in 1816, 17, 18, and 19, it is impossible to form any completely accurate estimate. Calculations, predicated on data, collected with considerable care, respecting the decline of manufactures in Pittsburg, Philadelphia, Rhode Island, &c. have carried the number as high as 60,000, with families averaging three each. This would make the whole number 240,000. When it is stated that in thirty out of sixty branches in Philadelphia, the number was actually reduced three fourths, or 7400—that in Pittsburg, it was reduced two-thirds—that the reduction in Rhode Island and in other quarters was enormous—this does not appear an unreasonable estimate. But I shall only assume two-thirds, or forty thousand manufacturers with families as above, making in the whole 160,000—and suppose that one-half of these, or 20,000 heads of families, devoted themselves to agriculture. This was the conversion of 80,000 customers of the farming interest, into rivals.

Let us then see the result. Estimates of the grain consumed by an individual in a country where it constitutes a main article of food, have been carried as high as sixteen bushels per annum. I will assume only twelve. This would make 960,000 bushels, equal to 192,000 barrels of flour, for which the regular farmers lost a market. When to this is added the surpluses of the new made farmers, the whole will be found not to fall far short of the extra exportation of 1820, which produced the calamitous reduction of price of that year. Thus, to say nothing of the loss of the market for the great variety of other articles constituting human food, as meat, eggs, butter, cheese, garden stuffs. &c. and of wool, flax, skins, timber, and other raw materials, the farmers paid a heavy penalty for a policy which many of them have supported with ardor.

The subject deserves to be placed in every point of view of which it is susceptible. Excluded as our bread-stuffs are, from nearly the whole of Europe, and limited almost entirely to the West Indies and South America, I will suppose that these markets require 750,000 barrels of flour annually—and that a fair price, to remunerate the farmer, would be eight dollars, which, if the requisite quantity only were shipped, would be about the average price. Increase the quantity to 1,000,000 of barrels, and the article will generally be a drug, and the price will probably sink to six dollars—in some cases to five. Reduce the number to 600,000, and the price will probably rise to 10, 11, or 12 dollars—often 15 or 20. And the farmer ought never to forget, that the prices of the foreign markets regulate the prices of the domestic one. It is impossible for the farming interest to overrate the importance of this fact. A few calculations will render the position clear.

About one-fifth part of the population of the United States, are purchasers of grain from the other four-fifths. This fifth is about 1,950,000, according to the last census—at least 2,000,000 at present. Assuming the consumption as before, it will be 24,000,000 bushels of wheat per annum, equal to 4,800,000 barrels of flour. A rise or fall of our flour in the foreign markets, raises or reduces the price not merely of what is shipped for those markets—but of what is consumed at home. Suppose a demand were to take place for Europe, of 500,000 barrels of flour, the price here would rise probably two dollars per barrel—but say only one; it makes in the year's consumption, a difference to the farmers of 4,800,000 dollars—if two, of 9,600,000.

Although our own experience sufficiently illustrates these positions, I think proper to corroborate them by the case of Great Britain in the years 1799 and 1800. The harvest was uncommonly unfavorable in the former year; but nevertheless, according to the most severe investigation by Arthur Young, produced crops amounting to two-thirds of the average crops of the country. The price, however, rose above one hundred per cent in less than a year, notwithstanding enormous importations, equal to above 11,000,000 bushels of wheat—and notwithstanding the free substitution of potatoes for flour—the prohibition of the use of flour to make starch—and also a prohibition to bakers to sell bread until one day old. From this strong case, it is fair to presume that a deficiency of one-third of an article of necessity, may raise the price 100, 150, or even 200 per cent. It can scarcely be doubted that the rise of grain and flour in England in 1800, would have been two or three hundred per cent. but for the energy, vigilance, and precautions of the government. Importations were invited from every quarter by considerable bounties, and every measure adopted, that could be devised, to prevent famine. The reduction, in consequence of an equal redundance, will not probably be so great—but must often be ruinous to the parties interested.

(To be continued.)

GREAT AGRICULTURAL PRODUCE IN THE YEAR 1823.

At the late Agricultural Exhibition of Madison county, New York, Benjamin Bartlett "produced satisfactory proof," that he raised 174 bushels of Indian corn upon one acre of land; and also that he raised 305½ bushels of Potatoes upon one half acre of land, for which he received the first premiums.

Madison Co. Observer.

Mr. Peter Boynton of Shelburne, Chittenden Co. Vermont, raised the past season, upon three acres and one tenth of an acre of land, 215 bushels of wheat, averaging 61 to 64 lbs. per bushel.

The following persons obtained premiums at the exhibition of the Stafford Agricultural Society, New Hampshire, which was held on the 16th October.

1st. Ephraim Wiley, of Gilmantown, for 114 bushels of corn per acre.
2d. Jethro Locke, of Barrington, for 107 bushels 26 quarts.
3d Joseph Edgerly, of Gilmanton, for 107 bushels 10 quarts.
4th. Joshua Otis raised 106 bushels.
5th. Ebenezer Eastman, 80½ bushels.
6th. Pearson Cogswell, 101¼ bushels.
7th. Gideon Gray, 80 bushels.
8th. Nicholas Gilman, 85 bushels.

New Hampshire Patriot, Nov. 10, 1823.

Wayne County (Penn.) Agricultural Society, November 4th.

Moses Harden, 95 bushels 10 lbs. corn, weighing 58 lbs. per bushel, on one acre.

Franklin Wheeler, 80 bushels 48 lbs. do.

Thomas Sillibridge, 77 bushels of oats, do.

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* *The difference of price, if it existed at all, would have been only temporary The experience of our coarse cotton goods is abundant proof on the subject. They are protected by a duty that is almost prohibitory—and, contrary to all calculations hazarded on the subject are furnished cheaper and incomparably better, than the goods for which they are a substitute. I invoke the aid of Alexander Hamilton's powerful pen on this important point:*

"Though it were true, that the immediate "and certain effect of regulations controlling the "competition of foreign with domestic fabrics "was an increase of price, it is universally true, "that *the contrary is the ultimate effect with every* "*successful manufacture.* When a domestic manufacture has attained to perfection, and has "engaged in the prosecution of it a competent "number of persons, *it invariably becomes cheap-* "*er.* The internal competition which takes "place, soon does away every thing like monopoly; and by degrees *reduces the price to the* "*minimum of a reasonable profit on the capital* "*employed.* This accords with the reason of the "thing, and with experience."

Sheldon Norton, 183½ bushels barley on a quarter of an acre.

Do. do. 4 tons 2 hun. 21 lbs. hay on one acre.

David Wilder, 230 bushels of potatoes on half an acre.

ANIMALS.—A yearling, exhibited at the late Saratoga Show, weighed 1325 lbs. and a calf ten months old, weighed 872 lbs. both raised by Mr. Gilbert Waring.

At the fourth Annual Cattle Show Exhibition, of the Rhode Island Society for the encouragement of Domestic Industry, holden at Pawtuxent, on the 15th and 16th of October, 1823, Dr. Benjamin Dyer, of Providence, was clad in a complete suit of silk, of a superior quality, manufactured in his own family, even from the culture of the trees to the growing of the worms, producing the material.

Brighton, October, 1823.

Gideon Delano, of New Braintree, produced 2744 lbs. cheese, and 171 lbs. of butter, from ten cows, fed on grass, between the 15th of May, and 1st of October—that is, 274 cheese, and 17 of butter to each cow; nearly 2 lbs. of cheese daily.

The Rev. J. B. White, furnished the following statement under oath.—His cow was raised by Noah Smith, of Sudbury, is nine years old, and came into his possession in the spring of the year, 1821. She calved on the 28th May. The calf was killed the 11th of July, she has given 156 lbs. 9 oz. butter, besides supplying the family with milk. Weight of one quart of her milk, 2½ lbs.; weight of milk given in a day, when the calf was a week old, besides what he took 35 lbs. 8¾ oz.; weight, when the calf was three weeks old, 32 lbs. 13 oz.

Weight of milk given on the day after the calf was killed, 60 lbs.

On the 27th September—weight of milk given in one day, 38 lbs. 12 oz.—15 quarts 1 pint.

On the 11th October, 36 lbs.—14 quarts 3 and one fifth gills.

From this it appears, that the mean weight of milk given by the cow from the time when the calf was killed to the present time, is 48 lbs. a day. It also appears that when the calf was killed she gave milk at the rate of a barrel of 32 gallons, beer measure, in 5 and one third days; and that she now gives milk at the rate of a barrel in eight days, and eight ninths of a day.

Mr. Capen stated under oath, that his cow was raised by himself; her sire was a bull of John Wells' stock, is eight years old; calved the 2d May. Since which she has furnished 202 lbs. butter; her greatest quantity of milk has been about 16 quarts per day, of very rich quality.

Mr. Rice, stated that his cow, by Denton, was three years old last February. She calved July 27th—has given from the 9th of August to the 13th October, 65 days, 2481 lbs. milk, averaging 38 and one fifth lbs. per day.

BUTTER.

Mr. Gilbert Van Emberg, at the late Brighton Agricultural Exhibition, in October, obtained a premium for butter. The following directions are given by him for making it.

The first object of the dairy woman, is to keep every article used in the manufacture sweet and clean. Tin is to be preferred for pails and pans.* These are to be scalded daily, and dried in the sun, or by the fire. In milking, great caution is to be observed, that no foreign ingredient gets into the pail. Take the milk from the cows overnight, after straining, keep it cool, so that in the warmest weather it may not sour. On the morning following, add the morning's milk to that of the preceding night, without any additional heat. After standing sometime, as soon as the milk begins to change, churn it. In summer this change generally takes place about ten o'clock; in colder weather it requires to be kept longer, for this purpose, say in spring and autumn, the milk of the first mass may be kept till the day following, and then it requires the addition of warm water to the milk to bring it to the proper temperature for churning. But in no case is the milk to be heated, except in the manner before described; where the cows cannot come daily to the salt water,* a quantity of blown or fine salt, is to be added to the milk before churning. The precise time for churning is to be carefully watched, and at the first indications of change, (or sourness) let it be immediately churned in the usual mode. The churn should be furnished with a plug at the bottom; and when the butter is fully come, the butter-milk is to be withdrawn by taking out the plug. Cold water of about half the original quantity of milk, is to be poured into the churn; and the churning resumed and continued until the butter is entirely separated from the milk, which may be easily learned from practice and observation. The butter is then to be taken out with a wooden ladle, and fine blown salt, worked into it with the ladle. Let it stand an hour, then work it over again in the same manner. This operation is to be repeated at the interval of an hour, two or three times, always with the use of the ladle, until the salt is thoroughly combined with the butter. It is then in a suitable state for *moulding*, or putting down in stone pots or kegs made of ash wood. The pots or kegs being well scalded, a strong pickle is then to be made of salt and salt petre; and being well strained, the sides of the pots or kegs are to be wet therewith, and as much fine salt sprinkled on as will adhere; the butter is then to be well packed down, and the pickle poured on the top.† The salt upon the sides of the vessel prevents the butter from adhering to it, and permits the pickle freely to pass to the bottom. The butter milk made by the foregoing process is of increased quantity and value from that made in the ordinary mode.

FOR THE AMERICAN FARMER.

SINGULAR PROPERTIES OF FOREST TREES.

In the Memoirs of John Evelyn, author of the *Sylva*, a work originally published in 1641, and lately republished, we find many curious properties, not generally knowo of forest trees. Whether the facts related by Evelyn, can be relied on, we know not; but the experiments are easily made:—

THE OAK.

1. The twigs of the oak, twisted together, dipt in wort, well dried, and then kept in barley straw, by being steeped in wort at any future time, will cause it to ferment and procure yeast.
2. The leaves of oaks, abundantly heaped on snow or ice, preserve it as well as an ice house.
3. Acorns, as well as oak leaves, and the masses of oaks, are sovereign remedies for many diseases.
4. Sleeping, or lyiog under the shade of an oak tree, is the best remedy for the paralysis.

FOREST TREES IN GENERAL.

1. The loppings and leaves of the elm, dried in the sun, prove a great relief to cattle, when fodder is dear, and will be preferred to oats by the cattle. The Herefordshire people gather them in sacks for this purpose, and for swine.
2. Beech leaves gathered about the fall, and somewhat before they are much bitten, afford the best and easiest matresses in the word, to lay under our quilts in place of straw. This he learnt in Dauphiny and Switzerland, where he had slept on them to his great refreshment. In another place, he tells us the French call these leafy beds, from the crackling noise they make when one turns upon them.
3. The keys of the ash, when young and tender, make delicate pickle; its bark is best for tanning nets, its wood for dryings, and for burning in a lady's chamber, being one of those which yield no smoke.
4. An excellent wine may be made from the sap of the walnut tree. Its green husk, dried and reduced to powder, makes excellent pepper. It is useful in corn fields, by keeping the ground warm, and its roots do not impede the plough.
5. The sap of the sycamore, and the sap of the birch, make also excellent wine, and may also be used in brewing, with such advantage, that one bushel of malt makes as good ale with sycamore, as four bushels with water.
6. The lombardy poplar ought to be used for farm houses, because mice and rats will not attack it, but will avoid such houses.
7. Ale, brewed with the ripe berries of the mountain ash, is preferred in Wales, to all other drink.

Occasional extracts such as these, of a practical character, connected with the objects of this paper, would be accepted with gratitude from our unknown correspondent.—*Edit. Am. Far.*

TO THE EDITOR OF THE AMERICAN FARMER.

OAK LEAVES FOR COVERING ICE—BETTER THAN STRAW.

Charlotte Court House, Virginia,
November 6, 1823.

SIR,—I see, in the American Farmer, Vol. 5, page 242, a writer on the subject of "building and filling ice houses." The season for filling is fast approaching, and I feel much obliged to the author of this communication; and why not all, who can add the least value to this scheme of preserving ice, do it in time? Crœsinus, your author, says one solid ounce of experience, is worth more than a whole *ton of theory*. This expression, immediately arrested my attention, and I read his piece with pleasure. It is well known to all who keep ice, that the *mass*, or *bulk*, should be large. The pit of my ice house is 20 feet square, and 18 feet deep; the floor, or bottom, is covered with split *oak* logs, and no well at the bottom; the square built up with round *oak* logs; at the top of this square, or pen of logs, a shingle roof is built on plates and joists on which a light floor is laid, except a place left to descend for the ice. It is needless for me to tell you, there should be a trap door made in the floor, which is only raised when putting away the ice. My only object at this time, is to convince you that straw is not a proper covering in any respect for ice, and should be avoided if possible. *Oak* leaves is the only thing that should be used as covering; and I was induced to try the *oak* leaves from reading a paper, a copy of which I send you enclosed. I recollect, when I was a boy, nothing delighted me so much as ice and snow—when off of the ice, I was balling and rolling up snow heaps—the larger the heap, the greater the fame. Many heaps, thus rolled, would last 'till nearly spring, and it was very remarkable, that whenever there were the most *oak leaves* with the snow, it lasted longest—and from recollecting this circumstance, I was convinced the *oak* leaves would do best as a covering for ice. Straw will heat and impart a bad flavour to any thing put about it. I have never known it put on, or about ice, but it would soon get damp, and consequently, the ice must be much exposed. The oak leaves have an effect quite the reverse of all this; as repelling heat, and not absorbing the least degree of moisture—neither will they impart a disagreeable flavour. My neighbours, since I have made use of the leaves, adopt the same plan, and say they will not use straw again.

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* *Stone ware pans are certainly preferable.*

* *Salt will be necessary under any circumstance.*

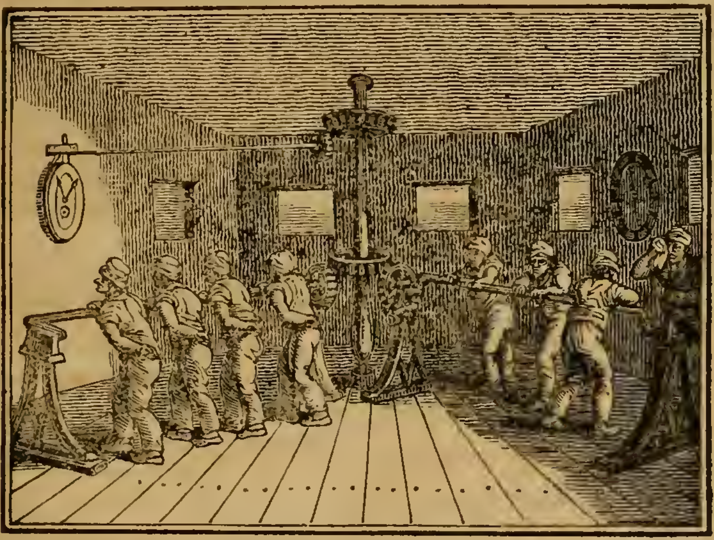
† *It is supposed that about two or three inches deep would answer.*

Your obedient servant,
MORTIMER.

FROM THE NEW YORK EVENING POST.

THE CRANK MILL.

The following representation of the Crank Mill recommended in England by Sir John Hippisley, member of Parliament, as a substitute for the Tread-Mill, has been engraved for the Evening Post from a similar one in the London Mirror. While crime renders it necessary that punishment should be inflicted on criminals, humanity enjoins that every species of severity bordering on cruelty, or calculated to injure the health of prisoners, should be avoided. As on almost every other subj[illegible] variety of conflicting opinions prevail in England respecting the tendency of the Tread Mill to enfeeble or mutilate the human body. From the declarations of several highly respectable physicians, who have made it their business to investigate the matter, we are inclined to think that it has that tendency, though perhaps, not to so great a degree as some have represented. Where, therefore, a machine can be substituted which produces the same effects, and answers the same purposes as the Tread Mill, without occasioning bodily injury, we apprehend no doubt can exist as to the propriety of giving it the preference.



In the first [illegible] Mirror we presented our readers with a correct view of the Tread Mill at Brixton, which has since been adopted, in several goals in England, and even in the United States of America. That it has had the good effect of inspiring some degree of terror in offenders we believe is acknowledged; but that it is the best means of employing or punishing prisoners, begins now to be very much doubted.—Medical men have ascertained that it has a very injurious effect on the constitutions of prisoners, particularly females—a circumstance which certainly, if fully proved, ought to be decisive against Tread-mills; since, in punishing prisoners for misdemeanors, and keeping them in safe custody, it is against the spirit of our laws to render them enfeebled or mutilated, or to send them in a worse moral or physical condition from the prison than when they entered it.

Without going so far as some of our philanthropists, who would refine away prison punishments so as to strip them of all their terrors, we may say that we think sufficient objections have been started to the Tread mill to make the subject worthy of further Parliamentary inquiry, which we doubt not will take place next session. In the mean time, Sir John Cox Hippisley has published a work which embodies all the evidence already taken before Parliament on the subject, with a very luminous letter from Dr. Mason Good on the inju[illegible] effect of Tread mills.

It would lead us too far to enter into an examination of what may be said in favor of or against tread mills, our purpose being at present to describe the Hand Crank-Mill in our engraving, and which is recommended by Sir John Hippisley as a substitute for the Tread-Mill.

In the machinery of the Crank-Mill, the principal objects are to apportion the degree of labor to the degree of punishment, and at the same time to throw every principal muscle of the body into healthful action. Our engraving shows the perspective appearance of a portion of this machinery, consisting of two cranks, in which two sets of men appear working at once. It is needless to observe, that any number of cranks may be placed, radiantly or otherwise, round the central shaft, so as to communicate the joint efforts of all the men to it at the same time, and that they may be so partitioned as to preserve the classification of the persons at work. The position of the men may be varied at pleasure: thus on the side of the sketch the men are shewn with their right hands only in action, and the right feet advanced; while on the other the left feet are advanced, and both hands in action. One man is likewise shewn with his face towards the others; and the whole may thus be disposed, alternately, by which the labor also may be occasionally increased or diminished. The operation of the hand cranks is so simple, and must be so obvious on inspection of the figure, as to render a minute description unnecessary. The cranks should be covered with loose ferrils of plate iron as a protection of the hands—each ferril of a due length for the labor of a single man. Each crank carries a bevil cog wheel at its extreme end, and all these wheels take in common into the cogs of an horizontal bevil wheel, bearing upon the perpendicular shaft, which passes through the ceiling, and gives motion to mill-work for grinding corn, or any other purpose which may be desirable, and to which the workmen have no access. Any one or more of the cranks may, however, be thrown out of gear, at pleasure, by which the work will be rendered more severe upon those that remain. In addition to this means of varying the extent of labor, the crank on the right hand side of the sketch is made adjustable, by means of screw nuts, so that its throw, or the circle which it causes the hands to describe, may be varied in the speed of the machinery, or the cranks may be changed for others of more or less radius, at will. The room, which it would be desirable should be open to the air in which the men work, should contain a dial clock, for the regulation not only of such mill-speed, but to determine the length of time during which each set of men is to work.

The oval figure suspended to the left of the engraving, represents a counter or tell-tale, which by means of a dial-plate, shows the number of turns that have been given to the machinery in the absence of the inspector during any period of time. Sir John Cox Hippisley, recommends that females be exempted from the labor of the Hand Cran k-Mill, as well as that of the Tread-mill altogether, it being evident it may be extended to a dangerous excess, without good vigilance on the part of the superintendants.

COURT OF KING'S BENCH.—May 28.

CULVERWELL *v.* EAMES.

This was an action brought by the above plaintiff, a master tailor, residing in London, against Messrs. Eames, the proprietors of the Portsmouth mail, for injuries which the plaintiff sustained, occasioned by the overturning of the mail, and of which he was an outside passenger.

From the evidence called on the part of the plaintiff, it appeared that when the mail was overturned, and the plaintiff's leg was broken, the proprietors ordered every care to be taken of the plaintiff, and even paid his bill for the surgeon's attendance, and also the expenses at the inn, amounting to upwards of £160.

On the part of the defendant several witnesses were called, and among them the guard and coachman of the mail; these proved that on the night of the accident, the mail came up with the Nelson coach from Portsmouth, that the guard blew his horn, when the Nelson started and went on, they, however, slackened their pace, and the mail again came up, when on the guard sounding his horn, the coachman of the Nelson broke the ground, allowing the mail to pass, and in so doing the coachman of the Nelson flogged his horses, whereby his lash catched the eye of one of the mail leaders, and starting forward run on a bank, when the mail was overturned It was also proved that the mail allowed ten hours to perform the journey, and the Nelson thirteen.

Witnesses also proved that the plaintiff acknowledged the accident was occasioned by the coachman of the Nelson flogging his horses, and that no blame whatever was attributable to the coachman of the mail.

The Solicitor-General, on the part of the plaintiff, considered such acknowledgments might have been made at the time the plaintiff was suffering under great agony; and the Jury returned a verdict for the plaintiff—Damages £40.

CANINE RACES.

MID LOTHIAN COURSING CLUB.

The Mid Lothian Coursing Club, met at Dalkeith, on Tuesday and Wednesday, the 5th and 6th of November, when the following prizes and matches were run for, near the Roman camp, on the property of the Marquis of Lothian:—

First, a pair of silver couples, for dogs under twenty months.:—

FIRST CLASS.

1st course—Mr. Dalrymple's b. d. Doubtful beat Mr. Anderson's yellow dog.

2d course—Mr. H. Dundas' w. b. Fly beat Mr. G. Wauchope's b. dog.

3d course—Mr. Wauchope of Edmonston's b. d. Nimrod beat Mr. Aitchison's b. and w. b. Menie.

4th course—Sir John Dalrymple's b. b. Needle beat Gen. Sharpe's y. d. The Stag.

SECOND CLASS.

1st course—Mr. Dalrymple's b. d. Doubtful beat Mr. H. Dundas' w. b. Fly.

2d course—Sir John Dalrymple's b. b. Needle beat Mr. Wauchope of Edmonston's b. d. Nimrod.

THIRD CLASS.

Sir John Dalrymple's Needle, Mr. Dalrymple's Doubtful—undecided.

Sir John Dalrymple's Needle beat Mr. Dalrymple's Doubtful, and won the couples.

Second, a cup for all ages:—

FIRST CLASS.

1st course—Colonel Wauchope's b. b. Needle beat General Maxwell's w. b. Nettle.

2d Course—Lord Torphichen's b. b. Thisbe beat Mr. Aitchison's y. b. Mary.

3d course—Mr. Baron Clerk Rattray's y. b. Cremona beat Mr. G. Wauchope's b. d. Eclipse.

4th course—Mr. Clerk Rattray's b. d. Rapid beat Mr. Dundas of Arniston's b. d. York.

5th course—Mr. H. Dundas' b. and w. d. Dandy beat Sir G. Montgomery's b. and w. d. Champion.

6th course—Sir James Baird's y. d. Sultan beat Mr. Dalrymple's b. d. Darling.

7th course—Gen. Sharpe's b. d. Swift beat Mr. Dewar's Blue Beard.

8th course—Mr. Wauchope of Edmonston's b. d. Quiz beat Sir John Dalrymple's b. b. Romp

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the Tobacco Inspected at, and delivered from Calhoun's Inspection Ware-house during the quarter, commencing on the 1st day of July, in the year eighteen hundred and twenty-three, and ending on the 1st day of October, 1823.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	2764	49	411	2815
Number delivered.				2668

RICHARD MACKALL, Inspector.

Treasury Office, Annapolis, Nov. 10, 1823.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

THE FARMER.

Baltimore, Friday, November 28, 1823.

☞ No perceptible change has occurred in the price of tobacco since our last quotations.

☞ Good news for the agriculturists of New York.—Gen. S. Van Ransellaer, always studious of using his ample means to promote improvements in agriculture, has placed $1000 in Liverpool, to be invested in neat cattle, of improved breeds.—To those who reflect how much time and money have been devoted in that country to attain the highest degree of perfection in all the qualities for which domestic animals are valued, it must be obvious that great benefit will now result from transplanting to our soil the matured fruit, produced by the skill and labour and close attention of more than half a century.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard street, from wagons, $6 50—fine do. $6—Wharf, do. $5 62½ to 5 75—White wheat, $1 17 to $1 18—Red do. $1 6 to 1 8—Lawler, $1 12 to 1 15—Washington white, $1 15 to $1 30—Rye, 42 to 44 cts.—New corn, 32 to 33 cents—Old do. 34 to 36 cents—Wharf Oats, 33 cts.—wagon Oats, 37½ cts.—Beef, 6 cts. per lb.—Live Cattle, $5 to $5 50, per cwt.—Bacon, hog round, $10—Pork, $7 per c.lb. 6 to 8 cts. per pound—Mutton, 4 to 5 cts. per lb.—Beans, retail, $1 25, cargo price, $1—Peas, retail, 62½ cts.. cargo price 48 to 50 cts.—Red Clover Seed, $6--Orchard Grass do. $2 50 Herds' Grass do. $2 50--Timothy do. $4--Flax Seed, 75 to 80 cents--Whiskey, from the wagons, 35 cents per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, No. 1, $6 50, very dull, No. 2, do. $5 to $5 50, do.—Herrings, No. 1, $2 50 per bbl., very dull No. 2, $2 25 do.—Fine Salt, 75 cents per bush., coarse, do. 70—Butter, (firkin) 12 to 13 cts. per lb—Eggs, 12½ cts. per doz.—New Hay, $14 per ton, old do $16—Straw, 7.

Durham Short Horn Stock

FOR SALE.

Billy Austin, a large Bull of two years, from Prize, by the noted imported bull, Denton. Prize was by Denton, out of Bughorn—she took two prizes at Worcester County Cattle Show; one of forty dollars at the Philadelphia County Exhibition, and one of twenty-five at the Pennsylvania Exhibition—price $200.

Jacob, a bull calf of 5 months from Prize, by Robroy, who was by Denton, out of Brindle, price $75.

Leopold, a bull calf of 9 months from the imported thorough bred improved Durham Short Horn cow Moss Rose, by Robroy. He took a premium at the Pennsylvania Exhibition—price $150—apply to

HENRY A. CARPENTER.

Paradise, Lancaster County, Pa. Nov. 24, 1823.

Robert Sinclair

Continues to manufacture and will constantly keep on hand, for sale at his *Factory* in *Baltimore*, a complete assortment of agricultural implements and *Machinery*.—Among the first he would name the *premium* two *Horse Plough*, made for him by John Stewart, and exhibited this month to the Maryland Agricultural Society, as well as the three and two horse ploughs of his own pattern, that received the approbation of the committee and intelligent observers.—He also keeps *Maxcy's Eschelon* premium three and five furrow *seed ploughs*, approved in like manner at our late *show*. Added to this, he will constantly have on hand *Freeborn's*, *Wood's* and *Carey's ploughs* of assorted sizes, with *Extra Shares*, and at very moderate prices; as low indeed as they can possibly be *made*, and *yet* be perfect in *workmanship* and *materials*.—He likewise makes *most* efficient *Corn Shellers*—they are small, durable, and admirable *machines*; and would save to any farmer, the whole cost of one in a season.

The much approved *Daton*, and the common straw cutters, together with very superior *wheat fans*, *root cutters* or *turnip slicers*, *cultivators*, *hinge* and common *harrows*, *drill machines*, garden tools—the *Spring Steel*, *Hay* and *Manure forks*—*screen*, *safe*, and *window wove wire*.—The well known Kinsey axes, and a very useful tool and implement that farmers ordinarily want, may be had at all times at his factory. Of *garden seeds*, he has on hand at present a very general assortment, and he has made arrangements to obtain fresh supplies from the *Shakers* of New England, and from one of the most reputable seedsmen in London: so that farmers and gardeners may depend upon the quality of the seeds which they obtain at his establishment, as being *fresh*, true, and of most approved varieties—none will be sold by him that are at all *doubtful* in any respect. He has raised many kinds with great care, and will continue thus to supply himself with many sorts. Added to *garden* seeds, he keeps at all times a full *assortment* of our field and grass seeds, viz:—*Red* and *White Clover*, *Timothy*, *Lucern*, *Herds*, *Orchard*, *Millet*, *Rye*, or *Meadow Oat*, and English grass seeds—all of which will be sold low for cash.

JACK FOR SALE.

Barbarossa, a jack bred by the subscriber from a large Spanish jennet, and sired by an imported Maltese jack of the pure Onagra stock, is offered for sale.—He is two years and four months old, now measures fourteen, and will, undoubtedly, when full grown, exceed fifteen hands in height—uniting the *bone* and power of the large Spanish breed, with the spirit, activity, and vigor of the Maltese.

At the late exhibition at Brighton, several gentlemen who have examined this species of stock in Spain—the islands in the Mediterranean,—and in South America, pronounced him to be superior to any they ever saw.—Barbarossa is coal black, except a little white under the belly, with a bay and mealy nose—perfectly kind and docile—was kept with a *filly* immediately after weaning, and has propensities seldom found in imported jacks; which must enhance his value in the estimation of those accustomed to breeding mules.—And the undersigned has no hesitation to assert, that he is equal to the celebrated jack *Compound* bred by General Washington; being of similar grade, and that he is superior to any jack now in the United States, or that can be imported. The price is $750 if speedily applied for,—otherwise he will be shipped to the Island of Cuba. Letters free of postage will meet with prompt attention.

S. W. POMEROY.

Brighton, near Boston,
November 20, 1823.

Printed every Friday at $4 per annum, for JOHN S. SKINNER Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore: where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

[The readers of the American Farmer will unite with the Editor in thanks to Mr. Buel, of Albany, for the following very interesting and valuable communication on the improvement of our meadow and pasture lands, and the various grasses applicable to these objects. The table compiled by Mr. B. is winnowed from a mass of calculations and objects, many of which are not adapted to the present condition of American Agriculture, and presents a *practical* aspect and character, calculated to impart information whereof every sensible cultivator may and ought to avail himself.

The brief, but comprehensive remarks of Mr. B. upon the habits and productiveness of the several kinds of grass mentioned in the table, are the more acceptable as coming from one, who, with extensive reading, unites diligent and judicious personal investigation by actual experiment on his own farm, and with his own hands. It would have been more satisfactory to have given the whole communication in one paper, but we are obliged often to forego our own judgment, for the sake of consulting the better taste of our readers, many of whom, as we have been lately admonished, have an aversion to what they call *long articles;* rather prefering, we sometimes fear, variety, to solidity of information—as the mass of an audience prefer laughing at the anticks of Matthews in the "Polly Packet" rather than view with breath-suspending admiration, the great workings of the human soul, as exhibited by Kean in the most pathetic passages of Othello.—Our own taste is the other way, but *de gustibus non est disputandum*, and moreover the Farmer belongs to its patrons and not to its Editor.—The observations of Mr. B. on *Long-rooted clover, Sain Foin, Timothy, Fiorin, Upright bent grass, American Cock's foot, Flat stacked meadow grass, Reed meadow grass, Smooth stalked meadow grass, Floating fescue grass, Cultivated grasses, Meadow grasses, and Pasture grasses*, will appear in our next.—*Edit. Am. Far.*]

TABLE,

Exhibiting in one view, the comparative value of some of the best Grasses cultivated in the United States, and in Great Britain, their products, nutritive matter, time of flowering and seeding, &c.

NAMES OF THE GRASSES.	SOIL EMPLOYED.	When experimented upon.	GRASS on four square feet.	lbs. per acre green.	80 dr. of grass weigh when dry.	lbs. per acre when dried.	Wt. lost per acre when dried.	64 acres of grass afford of nutritive matter.		Nutritive matter on an acre.	When in flower.	When in seed.	Prop. value which the grass bears at the time of flowering to that which it bears at the time of seeding.	When best cut.
			oz.	lbs.	dr.	lbs.	lbs.	d	g	lbs.				
1. Sweet scented Vernal grass,		In flower	11	7.827	21	2.103	5.723	1		122				
*Anthoxanthum odoratum**	Sandy loam	In seed	9	6.125	24	1.837	4.237	3	1	311	Apr 29	June21	4 to 13	In seed
		Latter math	10	6.806				2	1	239				
2. Meadow Fox tail,		In flower	30	20.418	24	6.125	14.293	1	2	470				
Alopecurus pratensis,	Clayeyloam†	In seed	19	12.931	24	5.819	7.111	1	1	461	May30	June24	9 to 6	In flower
		Latter math	12	8.167				2		255				
3. Rough Cock's foot,		In flower	41	27.905	34	11.859	16.045	2	2	1.089				
Orchard grass	Sandy loam	In seed	39	26.544	40	13.272	13.272	3	2	1.451	June24	July 14	5 to 7	In flower
Dactylis glomerata,*		Latter math	17	11.910				1	2	281				
4. Tall oat grass,		In seed	24	16.335	28	5.717	10.617	1		255				
Avena elatior,		Latter math	20	13.612				1	1	265	June23	July 16		In flower
5. Rye grass,		In flower	11	7.827	34	3.322	4 494	2	2	305				
Lolium perenne,	Brown loam	In seed	22	14.973	24	4.492	10.481	2	3	643	July 1	July 20	10 to 11	In seed
		Latter math	5	643				1		53				
6. Tall Fescue grass,		In flower	75	51.046	28	17.866	33.180	5		3.988				
Festuca eliator,*	Black loam	In seed	75	51.046	28	17.866	33.180	3		2.392	July 12	Aug. 6	20 to 12	In flower
		Latter math	23	15.654				4		978				
7. Meadow soft grass,		In flower	28	19.057	26	6.661	12.395	4		1.191				
Holcus lunatus,*	Clayey loam	In seed	28	19.057	16	3.811	15.246	2	3	818	July 14	July 26		In flower
8. Red clover—*Trifolium pratense*,	Do.	In seed	72	49.005	20	12.251	36.754	2	2	1.914	July 18	July 30		In flower
9. Lucern—*Medicago sativa*,	Do.	In seed	104	70.785	32	28.314	42.471	1	2	1.659	July 18	Aug. 6		In flower
10. Long rooted clover—*Trif. macrorhizum*,	Do.	In seed	144	98.010	34	41.654	56.355	2	3	4.211	July 18	July 30		In flower
11 Sainfoin—*Hedysurum onobrichis*,	Do.	In seed	13	8.848	32	3.539	5.308	2	2	345	July 18	Aug. 8		
12. Timothy, or Herdsgrass, }	Do. }	In flower	60	40.837	34	17.355	23.481	2	2	1.595				
or meadow Catstail, }		In seed	60	40.837	38	19.397	21.439	5	3	3.368	July 18	July 30	10 to 23	In seed
Phleum pratense,*		Latter math	14	9.528				2		297				
13. Fiorin—*Agrostis stolonifera*,	Bog Soil	In flower	26	17.696	35	7.963	9.732	3	2	967				
		In seed	28	19.057	36	8.575	10.481	3	2	1.042	July 28	Aug28	13 to 14	In seed
14. Upright bent grass—*Agrostis stricta*,*	Bog Soil	In flower	11	7 486	29	2.713	4.772	1	2	175	July 28	Aug30		In flower
15. American Cocksfoot. *Dactylis cynosuroides*,*	Clayey loam	In seed	102	69.423	48	41 654	27.769	1	3	1.898	Aug.30	Oct.20		In flower
16. Flat stocked meadow grass—*Poa compressa*.	Gravelly	In flower	5	3.403	34	1.446	1.956	5		265	July 30	Aug. 8		
17. Reed meadow grass—*Poa aquatica*.	Strong clay	In flower	186	126596	48	75.957	50.638	2	2	4.945	July 20	Aug. 8		
18. Smooth stalked meadow grass,	Bog earth and	In flower	15	10.209	22	.871	7.337	1	3	279				
Poa pratensis,*	clay	In seed	12	8.507	32	3.403	5 104	1	2	199	May30	July 14		In flower
		Latter math	6	4.083				1	3	111				
19. Floating Fescue grass—*Festuca fluitans*,*	Tenaceous clay	In flower	20	13.612	24	4.083	9.528	1	3	372	July 14	Aug 12		

† *The produce was nearly three-fourths greater on a clayey, than on a sandy loam.*

Note—Those marked with an *, are indigenous, or native plants of the United States.

TO THE EDITOR OF THE AMERICAN FARMER.

Mr. Skinner,

I have found in our publications on agriculture, very little information on the improvement of our meadow and pasture grounds. Indeed, the names of our native grasses are scarcely enumerated, much less are their habits described, or their relative merits, for hay and pasture, pointed out, in any American work which has fallen under my notice. A considerable portion of our lands are unsuitable for the system of convertible husbandry, that is, an alternation of grain and grass crops. Of this description are our stiff clays, marshes and swamps, and all those lands in which tillage is rendered difficult, by reason of hardpan, stones or habitual wetness. These should be improved as permanent meadows and pastures; and it is of the first importance to the farmer to know the grasses which will render them most conducive to profit: for that our grass lands are as susceptible of improvement as our tillage grounds, by a judicious selection of seeds, and suitable management, must be apparent to every reflecting mind. The improvement and productiveness of our cattle and sheep husbandry, which at this time deservedly engages much of the public attention, must depend materially on this branch of farming.

With a view to inform myself on this subject, I have been examining several British publications, which abound with information to the *English* farmer, and are not without their interest to the *American* cultivator. But this information is so diffuse, and so much of it inapplicable to our husbandry, that I have been induced, for my own gratification and benefit, to collect some of the most material facts in a condensed form, which, with some remarks of my own, I herewith communicate for publication, should you deem them worthy of a place in the American Farmer. I do it in the hope that its publication may induce experiments at home, and elicit useful information from gentlemen of science and practical knowledge, on the subject of grasses, particularly those which are indigenous to our country. The table is compiled from the appendix to Davy's agricultural chemistry. It is to be regretted that it embraces only nine species of American grasses. It, however, contains several approved foreign kinds, most of which have been more or less introduced among us already.

To those who do not possess Davy's work, it may not be amiss to say, that the results stated in the table may be implicitly relied on for correctness. The experiments were carefully made by George Sinclair, under the direction, and at the expense of the Duke of Bedford, at Woburn, in England.

Sweet scented Vernal grass.—This is a grass of diminutive growth, and it will be seen by the table, is not worth cultivating for hay. It is, nevertheless, considered valuable in pasture, on account of its affording very early feed, and growing quick after being cropped. We are advised by Muhlenburgh that it delights in moist soils; by the Bath papers that it does well in clayey loams, and by Dickson, that it grows in almost any soil, including bogs and sands. G. Sinclair, says it is eaten by oxen, horses and sheep, though not so freely as some other grasses are.

Meadow Fox-tail, possesses all the advantages of early growth with the preceding, and is much more abundant in product and nutriment. It generally constitutes one of five or six kinds which are sown together by the English farmers for pasture; and affords, withal, a tolerable crop of hay. It does best in moist soils, whether loams, clays, or reclaimed bogs. Sheep and horses have a better relish for it, says G. Sinclair, than oxen.

Rough Cock's foot.—Dr. Muhlenburgh and T. Cooper, concur in the opinion that this is the *orchard grass*, of the United States; though some that I have raised as orchard grass, does not seem to correspond with the figure of the *Dactylis Glomerata*, in the 2d vol. of Dickson's Farmer's Companion. In England cocks foot is taking the place of rye grass, with clovers. Arthur Young speaks in high commendation of it; though all writers concur in the opinion, that it should be frequently and closely cropped, either with the scythe or cattle, to reap the full benefit of its great merits. I should prefer it to almost every other grass; and cows are very fond of it. Cooper rates it above timothy, and says it is gradually taking the place of the latter, among the best farmers about Philadelphia. This is probably owing to the fact, that it is earlier than timothy, and of course more suitable to cut with clover for hay. Its growth is early, and rapid after it has been cropped. It does well on loams and sands, and grows well in shade.

If further facts are wanting in favor of this grass, for pasture, the reader will find it in the American Farmer of the 14th November, in an article signed Curwen, which, if I mistake not, means Col. Powell, of the neighborhood of Philadelphia, a gentleman who combines as much science with judicious practice, especially in cattle and grass husbandry, as any person in the union. He says, "I have tried orchard grass for ten years. It produces more pasturage than any artificial grass I have seen in America." Sow two bushels of seed on an acre.

Tall Oat grass. Both Arator, (Mr. Taylor,) and Dr. Muhlenburgh have placed this at the head of their lists of grasses, which they have recommended to the attention of the American Farmer. The latter says it is, of all others, the earliest and best grass for green fodder and hay. The Doctor was probably not advised of its deficiency in nutritive matter, as indicated in the foregoing table. It possesses the advantage of early quick and late growth, for which the cock's foot is esteemed, tillers well, and is admirably calculated for a pasture grass. I measured some on the 20th June, when in blossom (when it should be cut for hay) and found it four and a half feet long. The latter math, it will be perceived is nearly equal in weight, and superior in nutritious matter, to the seed crop. Sinclair says it thrives best on a strong tenacious clay; and Muhlenbugh prefers for it a clover soil. Dickson speaks well of it; says it makes good hay, but is most beneficial when retained in a close state of feeding. I have sown it in autumn and spring, with clover, on a sandy loam, with good effect.

Tall Fescue, although a native grass, has not fallen under my personal observation. It stands highest, says Davy, according to the experiments of the Duke of Bedford, of any grass, properly so called, as to the quantity of nutritive matter afforded by the whole crop, when cut at the time of flowering; and meadow cat's tail (timothy) grass affords most food when cut at the time the seed is ripe. It grows naturally in wet grounds, in bog meadows, and on the sides of ditches, often to the height of four or five feet. Our ignorance of agricultural botany, and of the intrinsic value of this grass, can alone have prevented its being more generally known and cultivated. It must be very valuable for wet grounds, as from its rapid growth it is calculated to smother or keep down the coarser kinds which naturally abound in those situations.

Rye grass, is extensively cultivated in Scotland, and the north of England, and where cock's foot has not superseded it, is generally mixed with clover seeds. It is rather declining in the public estimation. It does well in pasture; and as it contains much nutriment, is considered valuable for cows and sheep Dickson says it does best in rich moist meadows. Young does not speak well of it.

Red clover.—There are many species of the *trifolium*, and several varieties of red clover. Whether the kind we generally cultivate is the *pratense*, or not, I am unable to determine. The character of red clover, as an ameliorating and fertilizing crop, is too generally known to require illustration. It cannot be depended upon for permanent grass lands; though it yields to no grass in value for alternating with grain, in convertible husbandry. It formerly was as indispensable in a course of crops in Norfolk, England, (which has been considered pre-eminent for good tillage) as turnips; and the maxim then was, and still is, "no turnips no crops." But it appears from Young's survey of that county, that it cannot now be depended on oftener than once in from eight to twelve years. Trefoil, white clover, cock's foot, ray grass, &c. are therefore alternated with red clover in the grass years. There is reason to believe that neither red clover, nor other grasses, will bear repeating for a course of years upon the generality of soils. They exhaust the ground of the peculiar nutriment required for their support. In Great Britain, white clover, trefoil, rye grass or cock's foot are generally sown with red clover seeds. From twenty to thirty pounds of seeds are sown to the acre. In the northern states, timothy is generally sown with clover; though it is evident from the table that the mixture is an improper one for hay; for the clover is fit for the scythe ten or fifteen days before the timothy has attained to maturity. If sown alone, from eight to sixteen pounds of clover seed should be put on an acre: more on old land than on new.

White, or Dutch clover, (Trifolium repens,) is considered, in England, of importance to husbandry, if we are to judge from the great quantity of its seed which is there sown annually. With us, many districts produce it spontaneously; but it is too seldom *sown*. It shrinks greatly in drying, and does not contain as much nutritive matter as red clover; yet its value, as a pasture grass, is universally admitted. Its increase is very much facilitated by a top dressing of gypsum, lime or ashes.

Lucern, although affording much more green food, contains less nutriment in a single crop, than red clover. It must, however, be borne in mind, that it grows much quicker than clover, and will bear cutting twice as often. In the soiling system, an acre of lucern will keep four cattle or horses from the 15th May to the first October. I cut a piece last summer about the 15th May, and again about the 20th June, to feed green, and then ploughed the ground, and cropped it with ruta baga, which yielded sixteen tons the acre of roots, as fine as I ever saw. Mr. Fowell (see Young's Norfolk, p. 345) derived a clear profit of £13 17*s.* 4*d.* per acre from his lucern, fed green to working horses. This is almost equal to $60 the acre. An idea has prevailed, that it will not thrive in this latitude, (42—3); but the experiments of the late Chancellor Livingston, and of Le Ray de Chaumant, prove otherwise. I sowed seed in 1821, at the rate of 6lbs. the acre, with barley. It has stood the winters well, much better than clover; and has been in a state of progressive improvement. Drought has not afflicted it. The plants are very tender the first year; and require either a very clean tilth, or to be kept free from weeds and grass with a hoe the first year. It should have a deep loam, as it sends down tap roots five or six feet; and it is equally necessary that the ground should not be wet. It may be sown either in drills or broad cast, with or without grain. Fifteen pounds of seed are required for the acre if drilled, and 20 is not too much if sown broad cast. To the proprietor of a dairy, an acre or two of lucern would be valuable, to be fed to his cows, in addition to ordinary pasture.

(To be concluded.)

EXTRACTS

FROM MORE MODERN WRITERS ON THE USE OF SALT IN AGRICULTURE.—No. V.

A letter from a very considerable North American planter to the Editor of the Museum Rusticum, *respecting the great benefit of salt to cattle, with the method of using it.*

[*Concluded.*]

"Sea-Sand is very generally used in the country of Cornwall for manure, and the quantity which is every season carried away from different parts of the coast for the purpose of manure almost exceeds belief. From Bude, in the parish of Stratton, it has been ascertained that in one day as many as four thousand horse loads have been taken; and from the harbour of Padstow, it has been computed, that fifty-four thousand cart-loads are annually carried. The expense of land carriage for sand, used in the country, has been considered as amounting at least to thirty thousand pounds annually."

"That the beneficial operation of this sand depends upon the presence of calcareous matter there cannot be any doubt, but, at the same time, we are borne out by unequivocal facts, in believing that the sea-salt, with which it is impregnated, contributes materially to its fertilizing powers." Dr. Paris's *Memoir in the Transactions of the Royal Geological Society of Cornwall*, vol. i. 8vo. London, 1818, page 193.

"It has been said, that the benefit of salt as a manure has not been *demonstrated:* that neither the scale upon which it has been tried, nor the period for which it has been used, has been sufficient to remove *all doubt* upon the subject The want of general use, however, and the paucity of experiments, are accounted for by the prohibitory duties, which the salt laws have imposed upon the use of it; and since that objection was urged on the part of the Excise, in April last, the production of Mr. Hollinshead's statement has added so much strength to the former proofs, as to carry them almost to moral demonstration. In other inquiries we balance the comparative weight of testimonies. The twenty-nine persons whom I have referred to, as having expressed their opinions in favour of the use of salt as a manure, are many of them men of the first rank in point of science; all of them respectable in character, and with the advantage of practical knowledge.

"I add the list of their names; Bishop Watson, Sir John Sinclair, Dr. Darwin, Sir Rose Price, Colonel Scobell, Mr. Hollinshead, Mr. Davies Gilbert, Dr. Paris, Sir Hugh Platt, Mr. Alderman Farley, Mr. Jay, Mr. Ford, Mr. Bayley of *Hope*, Mr. Elliott, Mr Rigg, Mr. Le Grand, Mr. Kingston, Mr. Boaze of *Penzance*, Major Taubman, Mr. Stephenson, Mr. Horne, Mr. Gilbert of *Wincham*, Mr Hill, Mr. Wedge, Mr. Lee of *Oldford*, Mr. Beck, Mr. Sutton of *Middlewich*, Mr Holt, and the Rev. Mr. Cartwright.* It is hardly to be conceived that they should all of them be misled, or to have united to mislead the world upon the subject. I presume not to offer either argument or opinion, but merely submit to the reader facts and authorities,—quæ neque confirmare argumentis, neque refellere in animo est. Ex ingenio suo quisque demat vel addat fidem."—*Case of the Salt Duties*, by Sir Thomas Bernard, Bart. London, 1817, page 289.

Extract of a letter from I C. Curwen, Esq. to the Editor of the Carlisle Journal.

"I avail myself of this opportunity to say a word or two on the subject of salt. I rejoice to find the trials of it are numerous. In addition to what I have formerly stated in favour of it, I am now enabled to add, that out of fifty shearling Devons, killed this winter at the Schoose, the whole have been perfectly sound. Previous to the use of salt, it was rare to find a liver (of a sheep) that was not more or less tainted. The cattle and horses are continued in the free use of salt. Latterly, at the Schoose, I have given six ounces per day to work-horses—four with steamed potatoes, two with steamed chaff. I fully expect it will operate powerfully in preventing horses greasing. In the course of a few months I shall be able to speak more decidedly on the subject. I find the additional quantity of salt so far to agree perfectly well with the horses. The general use of salt will not only be found highly beneficial to the agriculturist, but will furnish so large an addition to the amount of the salt tax, as to justify and call for the reduction of the duty in favour of the public at large. About fifty thousand tons is all that pay duty in Great Britain. If salt were generally applied to the feeding of cattle, the consumption would reach six times that amount, and produce, at five pounds a ton, a sum equivalent to the present oppressive and unequal tax, in which a labourer pays a 26th part of his earnings, whilst the opulent do not pay more than from 500 to 1000th part on this indispensable necessary of life.—Copied from *the Farmer's Journal for the 4th of January*, 1819.

On a Remedy for the Black Scour in Sheep, extracted from a letter to the Editor of the Farmer's Journal.

Kilton, near Bridgewater, Somerset, Dec. 21, 1818.

SIR,

Salt possessing septic and antiseptic properties, it is obvious that it should be used with caution; indeed, experience (the best test of wisdom) has so instructed me. I have for the last ten years, and more, given salt to sheep in the following proportions, in all cases of diarrhœa, with the best possible success: two drachms (apothecaries weight) of dry salt for a lamb of nine months old, and that quantity increased to three and a half drachms for a large and full-grown sheep; and in the same ratio for the intermediate ages. The mode I adopt is to introduce the specified quantity into the mouth of the sheep with a spoon, withdrawing the spoon and closing the mouth. In a few seconds the salt dissolves in the saliva, and the sheep readily swallows it. I consider water not only inconvenient, but improper, as a superabundance of it was, in my opinion, the original cause of the disease. I have seldom found a repetition of the above dose necessary; but if *one* should not prove effectual, there can be no objection to repeating it, every other day, till the desired effect is produced.

Desirous of communicating, as well as receiving, useful information, I am induced to submit the above observations, under the full impression that they will be found beneficial to those who may be induced to make trial.

Remaining, Sir, truly your's,

CHARLES ADDAMS.

From *the Farmer's Journal, January the 4th*, 1819.

Extracts from Papers published by the Right Honorable Sir John Sinclair, Baronet, on the uses of salt for agricultural purposes.

"Salt, if employed in *large* quantities, in its natural state, is hostile to vegetation, yet it operates advantageously, in various ways when judiciously applied to arable land. In large quantities it has a tendency, like every other excessive stimulant, to disorganise and destroy the vegetable substances with which it comes in contact; but in *moderate quantities* it promotes the growth of vegetables.

"It has been proved by Pringle, and Macbride, that though salt will, in large quantities, prevent putrefaction, owing to its antiseptic properties, yet that it has an evident tendency to promote the process, when used in small quantities. Hence the advantage of mixing it in moderate quantities with farm-yard dung, and other animal and vegetable substances.

"An experiment was tried in Cheshire, of mixing grass roots and other rubbish harrowed off the land, with foul salt; it was then incorporated with other manures; and the effects of this compost, on a crop of barley and grass seeds, is said greatly to have exceeded the most sanguine expectations that had been formed of it.

"A farmer mixed up a quantity of refuse salt with the earth taken out of water furrows, and another portion of the same earth with lime. Of the two, the vegetation of that part of the field which had the *salt compost* laid upon it was by far the healthiest and most vigorous.

Vermin. "Salt destroys vermin in the ground, by making them void the contents of their bodies, such evacuations being too powerful for them to withstand. It has this additional advantage, that the vermin thus become food for those very plants, which otherwise they would have destroyed.*

Turnips. "Equal quantities of salt, and of turnip seed, were tried on a small plot of a garden, by the author of this paper; and the produce was more abundant than from the same quantity of turnip seed sown without salt. The efficacy of salt, as a destroyer of the turnip fly, or beetle, ought to be ascertained.

Hay. "Lord Somerville is of opinion that salt cannot be conveyed into an animal in a more effectual manner than by sprinkling the salt through a sieve, at the rate of twenty-five pounds weight of salt to a ton of hay, when in the act of putting it together, for every particle is imbibed in the fermentation, without a possibility of waste. This salted hay is of great use to sheep, when put on turnips early in the season, for the tops being then rank and strong, many of the sheep die suddenly from pent-up wind, occasioned by excess of fermentation in the stomach. Salt, or salted hay, are then devoured by them with a greediness, which denotes their salutary effect. By the use of salted hay, Lord Somerville did not loose one sheep on turnips in the autumn of 1801, though the season was rainy and unfavourable.

Straw. "The ancients were accustomed to prepare their straw for feeding stock, by keeping it for a considerable time *sprinkled with brine;* it was then dried, rolled up in bundles, and given to oxen instead of hay.†

Horses. In Flanders, it has been found that a small quantity of pounded salt is very beneficial for horses, when new oats are given to them, if the oats are at all moist; and there can be no doubt that moist food in general might be rendered less injurious by the same means; for instance, when raw potatoes are first given to horses.

"Birkbeck, in his notes on a Journey in America, recently published, mentions, that the horses he saw in the interior of that country were of an excellent description, *and are in high condition, even when travelling at the rate of forty-five miles per day, on long journeys.* They are fed well, getting four to five gallons of oats per day, besides hay, *with a good handful of salt about twice a week.*

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* *To this very respectable list the following names may be subjoined: Gervase Markham, Lord Bacon, Mr. John Evelin, Dr. Bury, Dr. Cox, Dr. Robert Plot, Dr. Brownrig, Mr. Thomas Hitt, Mr. C. Varley, Dr. Holland, Lord Erskine, Mr. I Christian Curwen, Dr. Rees, Lord Kenyon, Mr. Arthur Young, Mr. William Johnson, Mr. James Manley, and the late worthy Sir Thomas Bernard himself.—S. P.*

* *Lord Dundonald on the Connexion of Husbandry with Chemistry. Page* 138.

† *Dickson's Husbandry of the Ancients. Vol. ii. page* 408.

"Salt given to horses cures the *botts;* and it is said might be given with great advantage to race horses, and would prevent the necessity of applying those severe purges to which they are at present subjected.

Bullocks. "In the East Indies they give salt to their bullocks, in general daily, to the amount of two or three ounces mixed with their feed of pulse; a due proportion of salt they consider to be essential for their health, and almost as necessary as food.

Hogs "Great quantities of salt are considered to be injurious to hogs; but, in America, salt is occasionally given to them, to render them tame, and to prevent their being lost in the woods. Mr. Curwen also mixes some salt with the steamed potatoes he gives his hogs, and he thinks with benefit.

"It is said that in Ireland, when fattening their hogs, they sprinkle a little salt with every meal, by means of which they are found to fatten in half the period they would otherwise require."—Observations by John Marshall, Esq. on the Medical as well as the Dietetic properties of common salt, in the *London Medical and Physical Journal*, vol. xxxix. fo. 231.

Poultry. "Salt also may advantageously be given to poultry, and may prevent some of those disorders to which they are liable. The avidity with which pigeons consume salt is well known.

Hay. "In a recent communication from A. Bracebridge, Esq. of Walton on-Thames, he states, that some years ago, the clergyman of Holmes Chapel, who lived near the salt-works, gave a favorite old mare, who was much broken-winded, some spoiled hay *that had been salted* (at that time salt for agricultural purposes was free of duty.) The mare had nothing else to subsist on, but throve on that food so well, that she was fit to be put to work again next spring. This induced Mr Bracebridge to drench some rotten sheep, night and morning, with strong brine; after which, he did not lose one; they became fat, and the meat was fine and good, as if the animals had never been affected."

FARMING.

[*Concluded from page* 285.]

When we consider the veneration, approaching to idolatry, entertained for Adam Smith, by so many of our statesmen, it is wonderful and inexplicable how they overlook and disregard the wisest maxim in his work, the want of attention to which is the cause of nearly all the evils with which this country has been or is afflicted. It is a maxim grounded on the eternal basis of truth and good sense—and it may be pronounced, without pretending to the spirit of prophecy, that we never shall enjoy our full share of prosperity till we square our conduct by it. The maxim is—

"*Whatever tends to diminish in any country* "*the number of artificers and manufacturers,* "*tends to diminish the home market, the most im*"*portant of all markets, for the rude produce of* "*the land, and thereby still further to discourage* "*agriculture*"*

Were a convention held of all the wise statesmen of the earth, they could not have devised a sounder maxim than this, nor one more applicable to our situation. It unerringly points out the high road to "wealth, power, and resources."—"To the encouragement of *the domestic market*" for the "*rude produce*" not only of her own soil, but of every soil under the canopy of heaven, Great Britain owes her power, and capacity to lay, as she does, nearly all the nations of the earth under contribution. From the commencement of our government to the present hour, our policy has been diametrically opposed to this maxim. It has undeviatingly tended to "diminish the number of manufacturers and artificers," by encouraging, for the sake of revenue, the introduction under low duties, of foreign manufactures, and thus "*diminishing the market for the rude produce of the soil.*"

It is no objection to this maxim, that it is in hostility with nearly all the rest of the doctor's writings on political economy. This only proves that the doctor was not infallible, and ought to diminish the unbounded confidence of his disciples. When two dogmas are diametrically opposite to each other, it is for the good sense of mankind to judge between them—to reject the false and adopt the true. The doctor strongly urges the necessity and great advantage of free and unrestrained trade. This is the sum and substance of his celebrated work. But he admits that if high duties and prohibitions were all at once taken off, "*cheaper foreign goods, of the* "*same kind, might be poured so fast into the* "*home market, as to deprive all at once many* "*thousands of our people of their ordinary em*"*ployment and means of subsistence.*" This is not a problematical case. It would be some alleviation of the evil, if it were merely a "*might be.*" But the experience of the world shows that this is a slender reliance—and that the obvious and unfailing result is to "deprive numbers of their usual employment and means of subsistence." How then does the doctor provide a remedy for this most serious of all evils to a community, in a state of peace? He has two remedies. One, that those "*thousands of persons*" deprived "*all at once of their ordinary employment and means of subsistence*" might find "*collateral branches*" in which to provide "*means of subsistence.*" To this remedy there are two solid objections—one, there are no such "*collateral branches*" for nineteen out of twenty of all the trades and occupations on which human industry is employed—and the other, that if there were for every one, those "*collateral branches*" would be precisely in the same state of suffering, by the introduction of "*cheaper foreign goods.*" The second remedy is to send those "thousands of persons" to "*country labour.*" "*The greater part of such workmen,*" says the doctor, "*are employed in country labour.*" Here, then, the doctor, after deprecating the "diminution of the number of artificers and manufacturers" as pernicious to agriculture, by "diminishing the market for the rude produce of the soil," offers a system for general acceptance, in direct opposition to the practice of all the wise nations of the civilized world, the obvious effect of which is not only to "diminish the number" of those two classes, but to convert thousands of them into rivals of the agriculturists. This is not one of those trivial errors which may inadvertently escape in a great work through human fallibility, without materially interfering with its general scope and purpose.—No. It is a radical and vital error, and strikes at the very basis of his system, which it cuts up by the roots. If it be unsound policy, as it surely is, "*to diminish the home market, the most important of all markets, for the rude produce of the soil,*" and thus "discourage agriculture," Adam Smith's system of "unrestrained trade," which would, according to his own acknowledgment, not only produce that effect, but double the evil by unduly increasing the number of agriculturists, must be transcendently pernicious. I repeat, and it can never be too often repeated, nearly all our evils result from not attending to his first maxim. We raise too much grain for exportation. Hence it is generally a drug abroad. We raise too much cotton. Hence, though an object of the utmost possible necessity, the price has been most ruinously reduced. We raise and export too much tobacco. Hence the price has fallen so low as not to remunerate the planter. Whence arises the superabundance of those three great articles, "the rude produce of the soil?" From "*diminishing the number of artificers and manufacturers,*" by an unreasonable jealousy—and converting into rivals those who would be lucrative customers. This simple truth, level to the simplest capacity, has been in vain preached for thirty or forty years to our politicians and statesmen. This topic is too important to be dismissed without further illustration. I will suppose the case of an immigrant, who arrives here with a capital of 20,000 dollars, and establishes whatever branch of business he has been accustomed to, suppose the woollen. He and his family became customers of the farming interest, and afford "*a home market, the best of all markets, for the rude produce of the soil.*" He hires a mill seat, purchases machinery and raw materials, and engages workmen His whole capital is thus invested—and he produces an excellent article, which, in order to remunerate himself properly, he ought to sell, we will suppose, at five dollars per yard. When he comes into market; he unfortunately finds it glutted with a foreign article, it may be a good one, or, perhaps, as frequently occurs, made up, like Peter Pindar's razors to sell, and sold at vendue for three, three and a half, or four dollars, which may be less than cost. He can scarcely find a market at all; but if he does, his price must be regulated by that of the imported article. He sells with difficulty, and must sell at a considerable loss. He is thus arrested in his useful career, sells his establishment at a great loss, and either returns home, venting maledictions on his folly for having quitted his native country, to which he brings dejected spirits and broken fortunes—or else he "*goes back*" to the westward, according to the advice held out by our statesmen for thirty years past, an asylum to manufacturers divested of employment, and suffering on the sea board. If he returns home, he only deprives the American farmer of a customer. If he "*goes back,*" he does the farming interest a double injury—by not only ceasing to purchase its productions, but by becoming a rival in the market. This is not "*a fancy sketch.*"—It is a picture drawn from real life, of which thousands of instances have occurred in the short period that has revolved since the date of our existence as a nation. It is not confined to immigrants. I have now before me a letter from an intelligent American citizen, who, about twelve months since, engaged in the manufacture of satinets, and invested 16,600 dollars in the establishment, exclusive of raw materials and wages.

Mill, a building 38 feet by 45, cost	$6000
Machinery	5000
Dye House, &c.	600
Water right	5000
	$16,600

He employed 15 weavers, 3 spinners, 2 carders, 3 finishers, 1 dyer and assistants, and 25 boys and girls—in all about 27 or 28 adults and 25 children. His goods were as well manufactured as possible. Having reduced the wages to so low a rate as to afford a mere sustenance to his work people, his goods were offered cheap. But all would not do. He could not compete with the great quantities of rival goods forced to sale at vendue. I will let him tell his plain story—"Such is the extent to which our markets are flooded with British woollens, that we cannot now get within five cents per yard of what ours cost: and this is not because they can make them in England, and sell them cheaper than we can; for the owners of English goods make heavy losses; but it is because *they make our country the common sewer through which they vent all that remains on hand after they have supplied the home market*, and their other customers; or perhaps they are determined to run an opposition coach against our woollen manufacturers, until they ruin us; which they can do without any thing like the loss to which we are subjected. Making a profit on their other sales, they can flood us with but little diminution to their gain" About three weeks since, the whole of the work people, about fifty four, were discharged, and the factory closed.—Some of them from want of employment probably became paupers, and a public burden.—Others betook themselves in all likelihood to field labour, increasing a branch already too numerous. And thus for the sake of revenue, and for the sorry consideration of buying goods cheap abroad, we devote our enterprising citizens to ruin, and our work people to idleness and all its concomitant evils. As if nothing were too ludicrous or extravagant to be pressed into service against manufactures and manufacturers, the tendency of the former to demoralize a nation, has been zealously insisted on. That is, in plain English, by employing the poorer classes of our people, we hazard the destruction of their morals! and we improve their morals by shutting up our establishments, and depriving them of employment! It is impossible to reflect on the consequence of a policy predicated on such fallacy, without melancholy sensations.

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* *Wealth of Nations, Hartford* 1818, *II.* 149.

The farming interest, in the states of Pennsylvania, New York, New Jersey, Maryland, and in every quarter where grain formed its chief dependence, in consequence of the reduction of the price of flour, suffered the most intense distress at this period—a distress that could not be exceeded by the devastations of an infuriated army.

HAMILTON.

FROM THE NEW ENGLAND FARMER.

LESSONS FOR FARMERS.

Mr. Editor.—The following is founded on fact, and with a little variation is literally true.

Mr A. and Mr. B. are two farmers living only eighty rods distant from each other.—Their farms each contain about one hundred and twenty acres of land, being of equal value.

Mr. A. manages his farm so as to summer and winter twenty head of cattle, and keep them well, and always has a ton or two of good hay left in the spring. He raises about two hundred bushels of corn in a year, and about the same quantity of English grain.

He and his two sons, the one twenty and the other fourteen years of age, perform all the work on the farm, as they hold it a fundamental principle not to hire any labor, unless something special and unforeseen should render it absolutely necessary. This work is always done in season, and much time is gained, which is spent in building stone walls and making other valuable improvements on the farm. He never makes any bluster about his business, but always keeps a steady course, beginning early in the morning, and finishing his work in season at night. He says that he chooses to do his own work rather than hire it done, for if he does it himself it will be done as he wishes to have it, but if he hires it done he will have it to pay for; and there is the expense of boarding, which is something.

He says he is obliged to study economy that he may keep along and gain a little. He will not run in debt unless necessity compels him so to do, as he thinks it is better for him to do without things that would be convenient, but can be dispensed with, than to buy them on trust, and by and by be under the necessity of selling a yoke of oxen, or a piece of land to pay his debts. He and his sons drink no ardent spirit on any occasion whatever, for they have learned by experience that they can perform more work and be more robust and hearty without spirit than with it, and by abstaining from the use of it they save enough at least to pay their taxes, beside the hazard of consequences arising from the danger and force of habit. Thus by prudence and economy he is able to meet all his demands, contribute liberally to the various benevolent objects of the day, and add something to his permanent fund besides.

Mr. B. conducts his business in a very different manner. He has as much help of his own as Mr. A. yet his work is always driving him so that he is compelled to hire much extra labor, in order to keep business along.—He raises no more grain, nor cuts so much hay, nor gets done haying so soon, as Mr. A. He makes no essential improvements on his farm, for he says he can make more by working out with his team than he could to build stone wall and subdue his rough land. He is considered a temperate man, yet it costs him more for ardent spirit than it does to pay his taxes. He says he cannot work in hot weather, nor does he want his men to work without rum. He is in debt, and cannot bring both ends of the year together; yet he will not deprive himself or his family of the conveniences of life on this account. If himself or his family want any thing which they have not, he will buy it and pay for it when he can; so that instead of lessening his debts he is continually adding thereto, and according to the course of things he will sooner or later be obliged to sell a part of his farm to satisfy the demands of his creditors.

BOARD OF AGRICULTURE IN NORTH CAROLINA.

Agreeably to the act of last session, to promote Agriculture and Family Domestic Manufactures within this state, the following Presidents and Delegates of Agricultural Societies met at the Capitol on Monday evening last, viz:

Duncan Cameron, President of the Agricultural Society of Orange County:

Charles Fisher, President of the Agricultural Society of Rowan County:

Daniel M. Forney, President of the Agricultural Society of Lincoln County:

James W. Clark, President of the Agricultural Society of Edgecombe County:

Benjamin H. Covington, President of the Agricultural Society of Richmond County:

Jeremiah Pearsall, Delegate from the Agricultural Society of Duplin County:

Jacob Alford, Delegate from the Agricultural Society of Rebeson County: and

Tryam McFarland, Delegate from an Agricultural Society near Laurel Hill, in Richmond County.

On motion, Duncan Cameron, Esq. was unanimously chosen President of the Board, and J. Gales, Secretary.

Messrs. Fisher, Forney, and Clark, were appointed a Committee to report rules for the government of the Board.

The Board adjourned to Monday evening next at 7 o'clock, in the Conference Hall.

Internal Improvements.

CANAL FROM BALTIMORE TO CONEWAGO.

We have just read with great satisfaction the REPORT of THEODORICK BLAND, GEORGE WINCHESTER, and JOHN PATTERSON, Esqrs. Commissioners, appointed by the Executive of Maryland, to explore the route for a proposed canal between the points above mentioned.

The publick mind, previous to the session of the last Legislature of Maryland, had become deeply impressed with the persuasion, that immense advantages were to be derived by opening a more easy communication with that vastly extensive and fertile portion of country, penetrated by the upper waters of the Susquehanna; but in attempting to calculate these advantages, and the possibility of realising them, it was at once perceived that the *facts* were wanting, upon which alone a satisfactory estimate could be made, and that these facts could only be gathered by mathematical surveys and personal observation: hence the appointment of three amongst our most intelligent and trust worthy citizens to make these investigations;—and the subject will now be made matter of legislative consideration with all the lights necessary to arrive at just and practical conclusions: for every one who reads this report, will agree with us in opinion, that the Commissioners have exerted the utmost industry and cautiousness in the collection of their materials, and exhibited them with such clearness, ability and precision that no mind, however sceptical or timid, can well doubt the results for which they contend. The Report is, indeed, so exclusively *practical*, every part of it is so indispensible to a correct developement and understanding of the whole, and all superfluous considerations of the subject have been so rigidly rejected, that we find great difficulty in selecting any one part as being more pregnant than another. As, however, the portion of any one number of our Journal, which we can devote to one subject is necessarily very limited, we must be content with presenting a rough outline of the Report, wherein we shall endeavour to extract such parts as seem calculated to answer the enquiries that are supposed to be uppermost in the minds of those who take an interest in the subject, and desire to know what the commissioners have said and done.

On the *abstract question*, as to the advantages of canals in general, they have judiciously spoken very briefly, concluding that they are understood and admitted by all who have given themselves the trouble to enquire or think at all on the subject. The *general* view of these advantages, is thus happily set forth in a single page of their Report:—

"The great advantages of canal navigation are no longer a matter of speculation and theory; it has long since, and to a vast extent, and under every variety of circumstances, been reduced to practice; and unerring experience has every where furnished the same unequivocal evidence in its favour. These advantages are most important in many points of view; *first*, in cheapness; the expense of transportation on a canal amounts to no more than one cent a ton per mile; or one dollar for a ton for every hundred miles, the cost of transportation by land conveyance is thirty two dollars for the same distance, this difference is more than thirty to one in favour of the canal. *Secondly*, in speed; a loaded boat can be towed by one or two horses at the rate of thirty miles a day. *Thirdly*, in certainty; a vessel on a canal is independent of winds, tides and currents, and is not exposed to the delays attending conveyances by land; and *lastly*, in point of the safety; the advantages are no less obvious and decided the injuries to which merchandise is exposed when transported by land, or by natural navigation are innumerable; but, in a canal boat they are little more exposed to damage than in a warehouse. A canal, in a commercial point of view, may be considered as a great labour-saving machine; and, politically considered, its influence and consequences are of the most incalculable importance, in binding us together as one great people, in harmonising the discordant sectional feelings, and reconciling the apparently clashing interests of the several states, and thus tending to perpetuate the happy constitution and frame of government under which we live."

As to the *practicability* of a canal on a *direct* route from Baltimore to the head of Conewago falls, the commissioners say—

"The resolution, which has assigned us our duties seems to have taken it for granted, that there was a choice of routes in which a canal might be conducted from the head of the Conewago falls to tide; the one, in a course over the country from the head of those falls to the city of Baltimore; and the other, from the same point to the tide of the Susquehanna. If this was the opinion of its authors, we now feel satisfied, that it was founded on a very erroneous notion of the shape, elevations, and general topography of the whole country between the tide waters of the Chesapeake and the head of the Conewago falls on the Susquehanna. But we are not at all surprised, that such an erroneous notion should have been indicated in the resolution, since we have found it to have been the prevailing opinion through the country, when we commenced our operations; and one, which seems to have taken so strong a hold on the minds of the great majority of the most intelligent inhabitants, in whose information we, for a long time, placed much confidence, that it was not until after a most laborious investigation we abandoned all hope of finding a route for a canal, over the country at any distance from the margin of the river."

"It is true, that some of the head springs of the Codorus, Deer creek, and Gunpowder are found within less than a quarter of a mile of each other; but in the summer season, it is believed, there would be a deficiency of water even at the mouth of Codorus, and in Gunpowder at Ridgely's furnance to supply a canal forty feet wide and four feet deep, which is likely to be as much used as the proposed canal. To look for, or expect, therefore, to find a sufficiency of water from those streams with which to pass over this vastly elevated summit, which, on an inspection of the profile of Mr. Poppleton's series of levels, that crossed it at right angles, it will be seen, is in breadth more than eighteen miles, and mounts to an elevation in some places of more than one thousand feet, and every where, in that width, more than four hundred feet above tide, must be admitted to be altogether out of the question; and has been pronounced to be so by Mr. Geddes, as will be seen in his communication hereto annexed; and, in deed, was a matter about which there was not the least shadow of doubt, or difference of opinion in the mind of any one engaged in the survey. But even suppose there might be a sufficiency of water, if those streams were wholly and exclusively applied to the canal, it will only be necessary to run the eye along them, and take a cursory view of the immense amount of mills and manufactories upon them, every one of which must be bought out and suppressed, to be satisfied that it would be impossible from *pecuniary considerations alone*, so to monopolize and use them, even if it were in any way practicable to surmount the great physical difficulties."

"*Upon the whole, therefore, we feel satisfied, that there can be found no other practicable route for a canal from the head of Conewago falls to tide, than that which we have surveyed along the right margin of the river.*"

To the same effect, Mr. Geddes the Engineer says—

"Contrary to the expectations of many, it is now ascertained, by the application of instruments, that a canal conducted on the level of the surface of the river, from the head of Conewago falls, will not leave the valley of the Susquehanna until it arrives at the valley of Deer creek, within less than two miles of the tide water.—The above level, beginning at the head of Conewago falls, will be designated the *Conewago level*. When led along the river valley, this line of level will run out into the several lateral valleys a short distance, and still be brought back again to the faces or brows of the hills between them. After entering Maryland, the Broad creek valley would allow said level to be carried many miles, out from the river, but the high land, separating Broad creek from Deer creek, would bring it again back to the stony steep hill, the base of which is the river shore, along the brow of which hill it must follow to the valley of Deer creek. The only method of conducting a canal, from York-haven, southward, must be by following the valley of the river, locking down occasionally, as has been done in the Mohawk valley, in the state of New York."

In reference to the *extension* of the Canal after bringing it down by the margin of the river to the head of tide water at Port Deposit, the commissioners state—

"But the resolution contemplates a canal from the head of the Conewago falls to the city of Baltimore, as well as to tide. The next inquiry, therefore, after we had completed our survey downward, as far as the tide at Port Deposit bridge, was, whether it were practicable in any way, and in what direction, to continue and extend the route from that point to the city of Baltimore. A straight line, from Port Deposit to Baltimore, would pass over the very crown of the high, dry elevations of Sater's ridge, where, according to the description we have already given of it, there could not be the least expectation of finding water enough for a canal of the very smallest capacity; and, on looking more northwardly, the lands were perceived to rise still higher. *There was, then, no hope of finding a practicable route for a canal in any other direction than over the river flats below all the projecting spurs of Sater's ridge.* This route has been accordingly explored, levelled, and surveyed, and has been found to be not only entirely practicable, but much shorter and better than we had at first any reason to expect."

Then as to the *length*, and the *expense* of constructing the whole line of the canal and of its several sections, the report sets forth—

"This whole route, from the head of the Conewago falls to the city of Baltimore, will require a canal of ninety-two miles and three quarters in length; which, for the more perspicuous consideration of the subject, we have divided into three sections; *first*, that extending from the head of the Conewago falls to the Pennsylvania line; *secondly*, that which is within this state, and passes along the margin of the river down to a point about a mile above Havre-de-grace, where the route departs from the river, and takes a direction over the low lands toward Baltimore; and *lastly*, that which extends from the vicinity of Havre-de-grace to Baltimore. The first section, which is forty-one miles and fifty-one chains in length, is wholly within the state of Pennsylvania; and, in general, passes over a most uncommonly difficult, rocky, and uneven surface. In this section, if there are spaces where there will probably be found easy and cheap excavation; yet, there are others, where all the skill of an experienced and practical engineer must be called forth. For the whole of this section every allowance has been made in the estimates, for excavation, and the removal of all obstacles, that are in any manner apparent; and, that the aggregate amount of the estimate might be made as nearly accurate as possible, it has been divided into parts, according to the apparent character of each of them; and for every one of the several parts, a separate estimate made, taking into consideration the peculiar nature of each. Some portions of this section have been estimated as high as at the rate of eighty thousand dollars a mile; which it is believed, is as much as ever was allowed for any canal whatever passing over the surface, except the short distance where the great Erie canal of New York passes through solid limestone rock at Lockport. It is proposed, that in this section there should be a communication with the river by a lock at Wrightsville, immediately opposite to Columbia, so as to enable boats to pass through the canal to and from Columbia. The whole cost of this section has been estimated at one million, two hundred and twenty thousand, two hundred and sixty-five dollars.

"The second or middle section, is fourteen miles and twelve chains in length, and is altogether so entirely analogous in its nature to the first, that the same remarks will apply to it throughout. The cost of this section has been estimated at five hundred and sixty four thousand, four hundred and seventy-one dollars. The last and lower section passes over an alluvial soil, and is, therefore, expected to be every where very easy of excavation. In its whole length, of thirty-six miles and seventy-five chains and an half, it will pass, by aqueducts, at an elevation of twenty feet above the tide, over four rivers; that is, over a branch of Bush river, from the land of Doctor Davidge to that of Mr. Sewell; over another branch of the same river at Otter point; over Gunpowder, from the land of Mr. Caldwell to that of Mr. Oliver; and from General Stansbury's land over the principal branch of Back river. The cost, nature, and extent of these aqueducts have been carefully considered and estimated; they have all of them been deemed perfectly practicable; and the wooden frames, according to the experience on the Middlesex canal of Massachusetts, and the calculations on the canals of New York, may be accounted to last from fifteen to twenty years; when, if it shall be deemed advisable, the wooden structures may be replaced by iron, made after that manner which has been found, in Europe, to be comparatively cheap, safe, and practicable. It is proposed to open a communication, by locks, with this section and the tide near Havre-de-grace, for the purpose of admitting the arks, boats, and rafts, which may have descended the natural bed of the river, to enter and pursue their way in safety to Baltimore, without delay or transshipment; and also that the trade of Havre-de grace, and the head of the Chesapeake bay, may have a ready access through the canal, either to the Susquehanna country above, or to the city of Baltimore. The whole cost of this lower section has been esti mated at eight hundred and forty-one thousand, two hundred and sixty-three dollars.—The three sections making together an aggregate amount of two millions, six hundred and twenty-six thousand dollars for the cost of the whole canal from the head of the Conewago falls, of ninety-two miles and three quarters in length, into the basin, at the city of Baltimore.

"For a more particular and detailed account of the nature of the obstructions; the manner of construction; the feeders and supply of water; the cost of each portion, and of the whole; and the incidental charges, we must beg leave to refer to the report, maps and drawings of our engineer Mr. James Geddes, which accompany this; and which, we feel satisfied, will make the whole subject perfectly clear and comprehensible to the understanding of every one. And, for further and more minute explanations of the series of levels, that have been taken, and the surveys that have been made, we will also ask leave to refer to the books, plats, and drawings of Captain Bache, Mr. Poppleton, Mr. Bridges, and Mr. Bouldin, all of which accompany this."

(To be continued.)

Editorial Correspondence.

INTERESTING EXTRACTS *from letters to the Editor of the American Farmer.*

Rock Hall, Nov. 25th, 1823.

DEAR SIR,

I send you a sample of Carrots and mangel wurtzel, raised by me this last season. The mangel wurtzel is not so large as some few I raised two years past, but the aggregate of the crop is much larger: I gathered from 20 rows, 38 yards long, seven cart loads, closely packed and heaped up—and in many of the rows they were much scattered. I find the seed requires to be planted early in the spring, to ensure a crop, from the 1st to the middle of April, if the ground can be got in good order. I have failed in several crops by late planting—say 1st week in May. The seed will not vegetate when the earth becomes heated, and my land being low and wet, (which appears to be best adapted to their growth) it is but seldom I can get it sufficiently pulverized and dryed early enough to ensure the seeds coming up.

The method of cultivation was precisely as Cobbet prescribes in the cultivation of ruta baga. That is, I first spread the ground thinly over with sea ore or grass, and turned it in, breaking the ground 7 to 8 inches deep. As my plough was the common size Cary, or Connecticut plough, I had to run twice in a furrow to break it that depth, then harrow and roll, then throw up a list or ridge, throwing up two furrows on each side the ridge, making the ridges about three feet apart. I then lay the manure, which consisted of green weeds gathered in July and August, the last summer, and laid in a heap; some little refuse lime thrown on them, and a small quantity plaster paris; then well covered over with mould—a hollow or basin formed on the top to collect the rain water, and left in that state until spring, when my ground was prepared as mentioned. The bank was then opened and well mixed together, and then laid in the trenches between the ridges; the ridges were then thrown back with the plough, over the manure, and a high ridge formed; I then run a light roller on the ridges, covering two ridges each time; I then dibble the holes twelve inches apart for planting the seed. This can be done with great expedition, by fixing five or six pins, or pegs, one foot a part, in a piece of board three inches wide; then fix a forked or split stick in the board as a handle; the pegs to be about one and a half inches long, clear of the board; and when put on the ridge, a gentle press of the foot on the board, makes the holes very handsome and regular; the seed is then dropped and covered by hand. I find they grow more thrifty and larger from the seed than they do when transplanted. I have transplanted many, but have never had them of a tolerable size from that method. The ground the present crop grew on has not had any animal manure on it for the last three years, and only the vegetable manure made as before described, and I find that all vegetables that I have tried, grow much larger, and more thrifty with vegetable than with stable or cow yard manure. The carrots were raised with the same kind of manure: the method I adopted for them, was to make a narrow trench, forming an acute angle, 7 or 8 inches deep; the manure laid in about two inches, then covered with top mould, and raised one inch above the surface, to form a small ridge directly over the manure; this rise of the ground, or small ridge, makes it much more convenient to weed, while the plants are young The seed of both the mangel wurtzel and carrot, I obtained from your friend Mr. Redding. I have grown carrots of the deep orange colour, in the same ground that produced the present crop, for a number of years past, and always applied animal manure, but never had them to grow to a third of the size of the present. We have gathered many much larger than those sent you.

Your very respectful,
Obedient servant,
THOMAS HARRIS.

The two carrots sent to the Editor, weighed 6½ lbs.; the mangel wurtzel, 13¾ lbs.

Edisto Island, S. C. Nov. 9, 1823.

CRAB, OR CROP GRASS.

At the last meeting of our Agricultural Society, a specimen of crab (crop) grass was exhibited, which merits attention. It was seven feet high—grew on reclaimed marsh land, which last year had been planted in cotton, and was plucked from a field of twenty acres, the average height of which was upwards of *five feet.* After the cotton was harvested, the land was simply enclosed, and no care or labour subsequently bestowed. This fact sufficiently falsifies the assertion, that necessity obliges the planters of the South to become tributary to the Northern states, for fodder; and I am not surprised that this should have been so long the received opinion, when it is stated, that S. Carolina purchases from the state of New York alone, $25,000 value of hay per annum. I would certainly be within the bounds of probability, were I to assert that 70 or 80,000 dollars are thus yearly lost to the agricultural interests of our state; for it is an incontestable fact, that our enclosed lands seldom fail in producing rich and abundant crops of crab grass, but from some inexplicable cause they are rarely ever cut. We thus appear to avert our eyes from one of the choicest gifts of nature, and seem disposed to bend our undivided efforts to the cultivation of a single plant, (cotton) in the confident but too often blasted expectation, that with its surplus proceeds, all the necessaries and even luxuries of life can be purchased. It is a matter of congratulation, however, to reflect that the laudable exertions of our Agricultural Societies will speedily effect a revolution in the minds of our planters, and teach them the admonitory lesson, never to go abroad for that which can be procured, as it were, without labour, at home.

Very respectfully,
Your obedient servant,
W. B. SEABROOK

J. S. SKINNER, ESQ.

Extract of a letter to the Editor dated
WILMINGTON, N. C. November 8, 1823.

J. S. SKINNER, ESQ.

Sir—The ruta baga you sent me were sowed about the middle of July, and have thriven admirably well—many of the roots now weigh from 5 to 6 lbs.

I received a short time since, the small parcel of "Hardy Rice Seed," which you forwarded—fearing from its appearance, and your doubts on the subject, that it would not vegetate, I made trial of one third the quantity sent me, and find our fears realized; not one seed has sprouted.

I do not, however, think the seed would be valuable to plant on *tide swamp*, as far south as this. If it be peculiarly valuable at all, it must be because it thrives well in colder climates, or on *dry* land. The grain is inferior in size to the rice generally raised in this neighbourhood. It resembles in shape and appearance, (but is lighter) a species of rice, which was tried here some years since, called the "Patna rice."—The Patna rice, though heavier than the golden rice, now in general use, has been abandoned, because it does not bear beating so well, and shatters more in harvesting.

Very respectfully, your's,
WM. B. MEARES.

NILES'S WEEKLY REGISTER.

This work was commenced at Baltimore in September, 1811, and is still published there, at five dollars per annum, payable in advance. Of the character of the Register, which has been so long before the public, it is superfluous to speak. It was designed, at once, to be a faithful representative of political facts, and a watchful guardian of the rights of the people, without a prejudice or partiality to persons. How far it has succeeded is not for the editor to determine. He has only to say, that it shall continue to be published on its original principles, with fearless perseverance; and that it never shall be rendered subservient to the individual preferment or personal abuse of any man.

The ensuing session of congress will be one of more than ordinary interest. It is expected that some private business of the editor, totally unconnected with public men or political measures, will render it necessary for him to be much at Washington during this session, and he will, thereby, be enabled to present his readers with a nearer view of what shall be transacted than has heretofore been given in this work, that the people may the better know what their servants are doing or leaving undone. In representing facts, no consultation will be held with fear, or bargain made with expediency.

The subscription to the Register is one of the largest in the United States, but there is ample room for additions to it; and the editor respectfully requests his friends to increase his means of being useful, by extending the circulation of his work, for which purpose this paper is furnished.

As the current volume commenced on the first of September, ultimo, it is best that new subscribers should begin at that time, and that the back numbers will be furnished, that they may have a perfect work so long as they continue—Complete sets in 24 vols. may be had. Including the general index, and all the extra supplements, the price is *seventy* dollars, in sheets, folded and collected in volumes.

☞ The safety of the mails, when money is enclosed to the editor, is guaranteed. Address

H. NILES, *Baltimore.*

FROM THE NEW ENGLAND FARMER.

On the necessity of destroying some animals and preserving others for the use of man.

Whate'er of earth is form'd to earth returns,
Or takes the shape of matter decompos'd
To pristine particles unorganis'd,
Which constitute the principles of things—
Plants, animals, and all the mighty mass
Which forms the Universe are shifting still
In ceaseless change. All but the *soul* of *man*,
That particle divine will be the same
Amid the crash of worlds and wreck of matter.
Hence, great the distance, which exists between
The brutes, which perish, and immortal man.
The lower order of created things
Were made for man, subservient to his will,
Plac'd under him by that ALMIGHTY POWER,
Whose word omnific gave creation birth.
The brute inhabitants of earth, sea, air,
Though subject all to Man's supreme control,
Still claim the rights contain'd in Mercy's code—
And he who gives them needless pain deserves
To feel the pain his cruelty inflicts.
But still the noxious and the useless tribes
Of animals are rightly doom'd to slaughter;
And some must bleed to pay the just demands
Of man who nourish'd them, without whose care
And toil incessant, they had never been.
Should he not kill (as erst Pythagoras
Taught his disciples, and as Indian Bramins
Vainly contend) the fierce and ravenqus brutes
Would soon make earth a desert fill'd with nought
But beasts and birds of prey—should not his care
Improve his growing stock, their kinds would
fail:
Man then on roots and acorns must subsist,
And dwell in caves and hollow trees forlorn,
Quite destitute of every solace dear,
Connubial bliss, the ties of friendship—all
Which gives to life its polish and its zest.

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 5, 1823.

SEEDS, VEGETABLES, &c. &c. deposited at the office of the American Farmer, since last publication.

GUINEA GRASS—eight feet high, brought at Editor's request by CAPT. HODGSKINSON, direct from Jamaica. He says it is first planted thick in small lots—tillers very much—is then transplanted over a much greater surface in a manner to grow thus X, and is cut eight times a year.

A variety of seed of native flowers and plants of the Western country, by S. Garrison, Esq.—these were for presentation to the Horticultural Society of London, through D. Douglass, Esq. their botanical missionary. They will doubtless prove a very acceptable offering to that distinguished and publick spirited institution.

An ear of corn, by R. L. Colt, Esq. 15 inches long, such as is cultivated in the Eastern states.

MANGEL WURTZEL and CARROTS of immense size from the farm of CAPT. HARRIS, of Rock-hall. The mangel wurtzel, weighed upwards of thirteen, and the carrots nearly four pounds each.

HEADS OF EGYPTIAN MILLET, two feet six inches long, by Doctor J. S. SPENCE, member of Congress from Worcester, Md.

Proceedings of the Maryland Agricultural Society for the Western Shore.

A meeting was held at the office of the American Farmer agreeably to publick notice, for the election of officers for the ensuing year, and for the transaction of such other business as might be submitted for consideration:

The following officers were re-elected.

R. SMITH, Esq. *President*,
JAMES COX, Esq. *Treasurer*,
JAMES HOWARD, Esq. *Recording Secr'y*,
J. S. SKINNER, Esq. *Cor. Sec'ry*, and
E. DE BUTTS, M. D. *Professor of Agricultural Chemistry.*
Dr. H. WILKINS, *Professor of Botany.*
W. F. REDDING, Esq. *Collector.*

BOARD OF TRUSTEES.

CHARLES RIDGELY, Esq. of H. *President.*
SAMUEL OWINGS,
CHRISTOPHER CARNAN, Jr.
JAMES M. BOSLEY,
JAMES GITTINGS,
H. V. SOMERVILLE,
JACOB HOLLINGSWORTH, Jr.
JAMES CARROLL, Jr.
B. W. HALL,
JOHN PATTISON, and

In lieu of Robert Gilmor, Esq. and Dr. Samuel M'Cullch, resigned, the Society elected

Gen. R. G. HARPER, and
DAVID WILLIAMSON, Jr. Esq.

On motion of J. S. Skinner, the following Resolutions were adopted—

Resolved, that the President of the Society be requested to prepare for signature and presentation to the Legislature of Maryland, a memorial praying for pecuniary aid, from the State to the Society, on the Western and Eastern Shores, to an amount not exceeding——dollars per annum for each, on condition that a like sum shall have been previously collected by the Society on each shore, respectively; and for an act of incorporation; and for such other enactments as may be deemed beneficial for the interest of agriculture in Maryland.

Resolved, that the Trustees of the Society have power to fill up, from time to time, such vacancies as may occur in the Board of Trustees on either shore.

Resolved, that it be the duty of the President, the Treasurer, the two Secretaries, the Collector, and each member of the Board of Trustees to use all convenient means to procure regular subscribers to the Maryland Agricultural Society, for the space of five years, and for a sum not less than five dollars each, and that each one of the said persons make return to the next meeting of Trustees, and each successive meeting, of the progress then made in procuring such subscribers.

The Society then adjourned, *sine die.*

☞ *The next meeting of the Trustees will take place at "THE MOUNT," the residence of James Carroll, Jr. Esq. near the first gate on the Washington Turnpike, on Wednesday the 17th December, at* 10 *o'clock, A. M.*

PROCEEDINGS OF THE MARYLAND AGRICULTURAL SOCIETY, AT EASTON.

The Maryland Agricultural Society met in Easton on Tuesday the 25th of November, 1823, agreeably to public notice.—The Vice-President in the Chair.

The Constitution as amended being under consideration, the following resolution was unanimously adopted:

Resolved, That the Articles of Association, as amended at an adjourned Special meeting of the Maryland Agricultural Society, held at Baltimore on the 23d June, 1823, be and they are hereby approved and adopted, as the Constitution of the Society.

The Society then proceeded to appoint twelve Trustees, when the following persons were unanimously elected, viz: Nicholas Hammond, Edward Lloyd, Samuel Stevens, Tench Tilghman, Perry Benson, Robert Moore, Robert H. Goldsborough, Daniel Martin, Thomas Hayward, Henry Holliday, Lambert Reardon, and Samuel T. Kennard.

Joseph Haskins, Esq. was unanimously re-elected Assistant Treasurer, and

Dr. Thomas H. Dawson, Assistant Secretary in the place of Samuel T. Kennard who declined a re-election.

Resolved, that the above proceedings be published in the American Farmer, the Easton Gazette and Republican Star.

EDWARD LLOYD, *Vice President.*
SAMUEL T. KENNARD, *Ass't Sec'ry.*

N. B. The Trustees are requested to meet at the "Easton Hotel," on Saturday *next* at 11 o'clock A. M.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, best white wheat, $7 25—Howard street, from wagons, $5 75—fine do. $6—Wharf, do. $5 50, cash—White wheat, $1 12 to $1 18—Red do. $1 6 to 1 8—Lawler, $1 10 to 1 12—Washington white, $1 12 to $1 20—Rye, 42 to 45 cts.—New corn, 32—Old do. 34—Wharf Oats, 33 cts.—wagon Oats, 37½ cts.—Beef, 6 cts. per lb.—Live Cattle, $5 to 5 50, per cwt.—Bacon, hog round, $10—Pork, $5 50 to $6 per c. lb. 6 to 8 cts. per lb.—Mutton, 4 to 5 cts. per lb.—Beans, retail, $1 25, cargo price, $1—Peas, retail, 62½ cts., cargo price 48 to 50 cts.—Red Clover Seed, $6—Orchard Grass do. $2 50 Herds' Grass do. $2 50—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 34 cents per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, No. 1, $6 very dull, No. 2, do. $5 do.—Herrings, No. 1, $2 25 per bbl., very dull No. 2, $2 do.—Fine Salt, 75 cents per bush., coarse, do. 70—Butter, (firkin) 12 to 13 cts. per lb.—Eggs, 12½ cts. per doz.—New Hay, $14 per ton, old do $16—Straw, 7.

Brown's Vertical Spinner.

The subscribers have obtained the patent right for this valuable machine for spinning wool for the states of Maryland and Virginia, and the counties of Adams and Franklin, Pennsylvania; and are willing to dispose of their privilege of vending them for all or any part of said territory, except that part convenient to this city. They will within a few days be prepared to supply those that are in immediate want of the machines, and are making arrangements to have them constantly for sale. It is thought that those spinners are much superior to any thing ever introduced for family use. For a description of them, see the report of the committee on Machinery, at the late Cattle Show, held near this city.

Letters addressed to either of the subscribers, (post paid) will receive the necessary attention.

D. G. M'COY,
Corner of Eutaw and Balt. Streets.
JONATHAN S. EASTMAN.

☞ The price of the machine with six spindles is $20.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore: where every description o Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

GRASSES.

(Continued from p. 292.)

Long-rooted clover, is a native of Hungary, and I do not think has ever found its way across the Atlantic. The root is biennial, and if sown in the tall, lasts only during the next season. It penetrates to a great depth in the ground, and consequently is but little affected by drought. It, therefore, requires a deep dry soil. The product of this grass, when compared to others that are allied to it in habit, and place of growth, proves greatly superior. It affords twice the weight of grass, and more than double the nutritive matter, that is given by the common clover. It gives abundance of seed; and, says G. Sinclair, "if the ground be kept clean of weeds, it sows itself, vegetates, and grows rapidly, without covering in, or any operation whatever. Four years it has propagated itself in this manner, on the space of ground which it now occupies, and from which this statement of its comparative value is made." This species would, no doubt, prove a valuable acquisition to our husbandry, whether we consider its value for green food, hay, or as a green crop to be turned in preparatory to grain.

Sain Foin is peculiarly adapted to a calcareous, or chalky soil. It is true it is cultivated in Norfolk, England, which is a soil of sand and loam, naturally destitute of calcareous matter. But it is common, there, to dress their lands with clay marle, which abounds with carbonate of lime; without which dressing, says Young, Norfolk soils will not grow Sain Foin. This writer considers it "one of the most valuable plants that were ever introduced into the agriculture of Great Britain." The well known Mr. Coke cultivates 400 acres of this grass; and sows it without other seeds. Several attempts have been made to cultivate sain foin in this country, but hitherto, I believe, without success.

Timothy. This grass is distinguished in Great Britain, by the name of *meadow cats-tail*; in New England by that of *herds-grass*. The table shows that it is one of the most valuable grasses that are cultivated,—and, what is worthy the notice of every farmer, that it affords *more than double* the nutriment when cut in the seed, to what it does when cut in the flower. In tenacious, strong and moist soils, it is entitled to a precedence, perhaps, to any single grass for hay; yet, for the reasons already stated, it does not seem to be suitable for mixing with clover seeds, when intended for meadow. Another consideration which renders it particularly worthy of attention is the seed which it affords, and which may be saved without materially diminishing the hay crop. From ten to thirty bushels of seed, may be taken from an acre of timothy, which at the price it now bears, is of itself, a handsome remuneration.

Fiorin,—has, of late years been brought into notice in Great Britain, by the experiments and recommendations of Dr. Richardson; who particularly recommended it for the cold, boggy soils of the mountainous districts, where ordinary grasses would not thrive. The peculiar value of the fiorin, and of other grasses of the *agrostis* family, arise from their fitness for *winter pasture*; as they lose very little of their bulk or nutriment by remaining on the soil after they have ceased to grow. Its name *(creeping bent, or couch grass)* implies a difficulty in mowing it, except on a surface perfectly smooth. We have seen it frequently recommended to the notice of American farmers; but from the very limited progress which seems to have been made in its cultivation, we infer that it has fallen short of public expectation.

Upright bent grass. Dr. Muhlenbugh considers this the *herds-grass* of the southern, and the *foul meadow* of the eastern states, of which *white-top* and *red-top* are varieties. The small weight of hay, and of nutritive matter, afforded by the *agrostis stricta* in the table before us, shows that this grass is more congenial to our climate than to that of England: for, in both quantity and quality, our foul meadow and red top seem to approach our favorite timothy. In my boggy soils, hoth varieties of this grass have come in spontaneously, as soon as the ground has been cleared and drained, have soon formed a compact sod, and afforded good hay and good pasture.

American Cocks foot, is wholly unknown to me; and I have not been able to learn much from enquiry as to its merits. M'Mahon calls it the *swamp* cock's-foot; and says it grows well in swamps and moist soils. As it is a native grass, and appears to afford an abundant crop, it is to be hoped that some one acquainted with it will bring it into further notice.

Flat stocked meadow grass. This, according to Muhlenbugh, is the *blue grass* which is considered a pest in many of our tillage grounds. The small crop which it gives, and the little nutritive matter which this affords, shows the little dependence which ought to be placed upon it for grazing or hay.

Reed meadow-grass, otherwise *water meadow-grass*, is not natural to our country. As it affords a great burthen of hay, and is, withal, rich in nutriment, it might be a valuable acquisition to our swamp grounds, which constitute its favorite soil.

Smooth-stalked meadow grass, is a native plant, and is well adapted for permanent pastures. It grows quick after being cropped, and does well upon dry grasses.

Floating Fescue grows well in swamps and bog soils, where good kinds are most wanting.

I would suggest, with much deference, whether grasses may not be divided, for the *practical* benefit of farmers, into three kinds, to wit.—Cultivated grasses, meadow grasses, and pasture grasses;—and whether these may not be again subdivided to suit different soils and localities. I will illustrate my project, by attempting a classification, of the grasses enumerated in the preceding table, from the data which it affords, and the practice of judicious farmers:—and

1st. *Cultivated grasses.* All kinds, strictly speaking, which the soil does not produce spontaneously, are cultivated grasses: But the term, as generally used, and in the sense I here employ it, applies only to such as are sown *to alternate with grain, pulse and roots, in a systematic rotation of crops.* The grasses selected for this purpose, are generally the Red-clovers, Lucern, Sain Foin, Orchard, Tall oat, Timothy, or Rye grass. Clover is the primary dependence on all soils which will grow it, and particularly where gypsum can exercise its magic powers As vegetables are said to exhaust the soil, in proportion to the smallness of their leaves (the larger their leaves, the more nutriment they draw from the atmosphere, and the less from the soil) clovers are entitled to the high commendation they have obtained among American farmers. But as these plants are liable to premature destruction by the frosts of winter, it is both prudent and wise to intermix with their seeds those of some other grass more to be depended on. For this purpose,

On sands, loams, and gravels, and these constitute the soils usually employed in convertible husbandry, the orchard grass, or tall meadow oat grass, appear to be best calculated to ensure profit. They grow early, delight in a clover soil, and are fit for the scythe when clover is in the bloom, the time it ought to be cut. The hay from this mixture may be made before harvest commences; and, if the soil is good, a second crop may be cut almost equal to the first. If intended for pasture the second year, either of these grasses will afford more abundant food than timothy.

In clays, the meadow fox-tail, an excellent grass, might be substituted, though, according to Sinclair, the tall oat grass will do well here also. *In wet soils*, where clovers do not grow well, timothy and meadow reed grass would be a good selection, sown either separate or together.

Lucern and sain foin require a deep dry soil, and are generally sown without other seeds. The first does not attain to perfection before the third year; and both, where successfully cultivated, are permitted to occupy the ground from six to eight years.

2d. *Meadow grasses.* In selecting these, the object is to obtain the greatest burthen of good hay, and to mix those kinds which may be profitably cut at the same time.

For clayey and moist soils, many valuable and nutricious kinds seem to be well adapted, that is to say, Meadow Fox-tail, Timothy, Tall oat, Meadow soft grass, floating Fescue, Rye grass, Reed meadow, Smooth stalked meadow, American Cock's-foot, upright bent or Herds-grass, and Tall Fescue. And the five last are peculiarly suited to swamp or *bog soils*. For *dry loams, sands and gravels*, which never ought to be kept long in grass, the cock's foot, or orchard grass, and tall oat, are probably the best; and to these might be added red and white clover.

The great difficulty is to prevent the deterioration of meadows. This takes place from the better grasses running out, and giving place to coarser kinds, to moss and to useless or noxious plants; aided often by a neglect to keep them well drained. The finer and more nutritious kinds thrive best in *moist*, though they will not live long in *wet* soils. Hence it is of the first importance to keep the surface soil free from standing water, by good and sufficient ditches; and it often becomes necessary, and it is in most cases advisable on a flat surface, to lay the land in ridges, at right angles with the drains. Another precaution to be observed, is not to feed them with stock, when the soil is wet and poachy. Harrowing in the fall, has been found beneficial to meadows. It destroys mosses, and covers the seeds of grasses which have fallen, or may be sown, and thus produces a continued succession of young plants. In Europe, lime is used with good effect as a top dressing to grass lands, as are also ashes. With us, the annual application of a bushel of gypsum to the acre is found highly beneficial. It not only thickens the verdure with clover, but is of advantage to most other grasses. Stable manure should be applied only when it can be spared from the more profitable uses of tillage. When the means above enumerated fail to ensure a good crop of hay, it is time to resort to the plough and a course of crops.

3d. *Pasture grasses.* But few of the grasses most valued in Great Britain for pasture, are the natural growth of the United States; but it is believed, that if the seeds are once introduced upon our farms, we shall find little difficulty in naturalizing them. Neither the orchard nor vernal grass, which are said to be indigenous to our country, are recognised in the grass lands which have come within my observation;

yet they constitute, with fox-tail and tall oat grass, the earliest and most valuable varieties for perennial pastures. The meadow fox-tail, and orchard grass, together with our white clover and green meadow grass, *poa viridis*, (which seldom require to be sown) I think would form the best selection for all grounds which are moderately dry. The rye and oat grasses, or meadow soft grass, might be either substituted for the two first, or combined with them. These would afford spring, summer, and fall feed, abundant in quantity, and wholesome and nutritious in quality. On wet soils, (though pastures require to be drained as well as meadows, to ensure a rich herbage) the Tall Fescue, Smooth stalked Meadow, Upright bent or Herds-grass, may be introduced to advantage. Gypsum is applied to pastures with the same benefit that it is to meadows.

I will conclude this already tedious communication with a request, that you will confer on me a particular favor, by forwarding, if to be obtained in your city, a small parcel of seed of the Meadow Fox-tail, Tall Fescue, Hungary clover, and American Cock's foot, or either of them, care of Thorbern and Son, New York. I have the Tall oat, Rye grass, Orchard grass, and Lucern growing. Most of the other grasses that I esteem valuable are already among us.

J. BUEL.

NAMES OF DOMESTIC ANIMALS AT DIFFERENT AGES.

[In English works on Agriculture, domestic animals are spoken of, by different names, *according to their ages*, and sometimes to other circumstances, and in this country, butchers, graziers and other persons who deal in different species of these animals, designate them by particular names which are in some measure technical and not familiar to all. Young farmers are apt to think such things of trifling account, but we hold that they ought to be *up to* every thing of the kind, which is so immediately connected with their own business. It is their "vocation," and they ought to neglect no sort of information that may enable them to conduct their affairs or to understand with more facility whatever they read or hear in relation to any branch of their own pursuits. Under this persuasion, we have selected the following.]—*Edit. Am. Far.*

ACCOUNT OF THE NAMES OF DOMESTIC ANIMALS AT DIFFERENT AGES.

The general name by which the male sheep are known, is Ram or Tup. When lambs, they are called ram or tup lambs as long as they suck. From weaning, or taking from the ewes, to the shearing or clipping for the first time, they are called hogs, hoggerels, or lamb-hogs. Then they take the name of shearing, shearling, shearhog, or dinmond tups or rams. After that, according to the years they are clipped or shorn, they are called two-shear, three-shear, and so on, which always takes place from the time of shearing.* But when gelt or castrated, they are called wether-lambs while sucking; then wether hogs, until shorn or clipped, when they take the name of shearings, &c.; until they are shorn a second time, when they are called young wethers, or two shear-wethers: then three or four shear-wethers, or more, according to the times they are clipped or shorn.

The general name by which the female sheep are known, is Ewe: while sucking, they are called ewe lambs, or gimmer-lambs; but when weaned, or taken from the dams, they are called ewe hogs or gimmer-hogs, until clipped or shorn for the first time, when they take the name of gimmers, which name continues only one year, until they lose their fleeces a second time, when they obtain the name of ewes, which they retain as long as they live; only, every time they are shorn, they add a year to their age, and are called two-shear, three-shear, or four-shear-ewes, according to the times they have been clipped or shorn: And this holds good of all other sheep: for, the age of sheep is not reckoned from the time they are lambed, but from the time of shearing: for, although a sheep is generally 15 or 16 months old when first shorn, yet they are not called shearings until once clipped, which is understood to be the same as one year old.

The general name of the male in Neat Cattle, is Bull. During the time he sucks, he is called a bull calf, until turned of a year old, when he is called a stirk or yearling bull; then a two, three, or four year old bull, until six, when he is aged: but when castrated or gelt, he is called an ox or stot-calf, until a year old, when he is called a stirk, stot or yearling; then a two year old steer, and in some places a twinter:—at three, he is called a three year old steer; and at four, he first takes the name of ox or bullock, though formerly I believe the castrated male was not called an ox or bullock until six years old,† when he is looked upon to be at the best, though some people think an ox improves until seven, eight, or even nine years old. The general name of the female of this kind is Cow: while sucking the dam, she is called a cow calf, quey calf, or heifer-calf; then yearling quey or heifer; then a two year old quey or heifer, or twinter; the next year a three year old quey or heifer, and when four, she is first called a cow, which name is retained till the last. If castrated or spayed, she is called a spayed or cut heifer, or spayed or cut quey in the North parts of the island.

A Stone-horse or stallion is what we distinguish the male of the horse-kind by: while sucking, he is a foal or colt-foal, then a yearling colt,† afterwards a two and three year old colt, until four, when they are most commonly called horses, which name holds through.

The female of this breed is called a Mare: when sucking, a mare or filley-foal, then a yearling-filley, afterwards a two and three year old filley, and at four she becomes a mare.

Of the Pig-tribe the male is called a Boar or Brawn, the female a Sow, the castrated male a hog-pig, the cut or castrated female a gilt or gaut. Pigs or Swine are common names for the whole tribe.

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* *The age of sheep is also known or pretended to be known, by the changes on their fore-teeth; I say pretended, because I take upon me to say that it is a very uncertain way of judging, as I will endeavour to show afterwards.*

† *I apprehend the taking the name of ox or bullock at four instead of six years old, has taken place since the drawing or working of oxen has been so much disused.*

† *In some places a colt from one to two years old is called a stag.*

From the Massachusetts Agricultural Repository and Journal, Vol. vii.

ON GELDING HEIFERS, SWINE, &c.

GENTLEMEN,

I have presented for premium five spayed sows perfectly healed and in good condition, and conformably to the rule prescribed to entitle an applicant to the premium, I beg leave to state the process in manner following, viz.:—The animal is laid on its side and held fast by one person unless over forty pounds weight; exceeding that weight two persons may be necessary. An incision is then made from three to six inches long, proportioned to the size of the subject, through the integuments and abdominal muscles to the peritoneum,* in a transverse direction from the spine toward the linea alba,† at the distance of about one inch from the last short rib of one side, (the opening nearly corresponding with the direction of the rib,) the peritoneum is then to be cautiously opened to prevent wounding the intestines. The intestines are next to be turned out with the hand, which exposes the ovaria (which are two oval bodies on each side of the uterus, about the size of a walnut in a pig of sixty or seventy pounds weight) consisting of a number of small vesicles called ova; these are removed by the knife, the intestines replaced, and the external wound sewed up, the pig may then be returned to the stye and fed sparingly for a few days. In addition to the pigs now exhibited, this operation has been performed on twenty sows of various sizes at Byfield, in the county of Essex, and at Brighton by direction of Mr. Parsons, who authorizes me to state to you, gentlemen, that he is perfectly satisfied with my ability to perform this operation successfully.

With great respect your obedient servant,

JOHN BAKER.

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* Peritoneum, *commonly called film of the belly.*

† Linea alba, *is a straight line drawn from the point of the breast bone, directly between the legs.*

HORSES AND SHEEP.

Extracted from the Archives of Useful Knowledge, 2d Vol. page, 298.

A comparative view of the expenses and profits of raising horses and sheep.*

Expenses of raising one colt, viz.

Finding the mare one winter, including loss of use of her, and other unavoidable expenses,	$40 00
Finding the colt till four years old, at $30 per year,	120 00
Amount,	160 00
Risque of the life of the mare and colt, during the raising, is worth the interest of the amount for one year,	9 60
	$169 60

Expenses of keeping 20 sheep for four years.

Feeding 20 sheep four years, at $2 a year each, is $40 a year, and four years is†	$160 00

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* One of the most philanthropic and enlightened gentlemen of New England, has promised the Editor a paper on the natural history, capacities and qualities of the *mule*—and a comparison between that animal and the horse, for the various purposes to which each is applicable—we are bound to wait with patience, but were it only for the gratification we find personally, in perusing every thing from his pen, we could not repress the expression of a hope, that he may soon find leisure to fulfil his promise.

Edit. Am. Farmer.

† *This estimate is too low. To keep a sheep as he ought to be, summer and winter, will cost $4 per year. But even at that rate, the superior profit of sheep is evident.*—Editor of Archives.

They will probably raise in the time 80 lambs, at $2 each, which ought to be deducted,	160 00
They will produce annually $30 worth of wool, which will be a net gain of	120 00

By this calculation it will appear, that the horse when raised, must sell immediately on rising four years old, for the sum of 169 dollars 60 cents, to make the farmer whole for the expenses of raising him.—And of course, if he should remain one year on hand without profitable employment, the whole expense of keeping a full grown horse a year, say 60 dollars, must be added.

But the business of raising sheep, calculated to the same amount of expense, refunds the cost of feeding, and leaves to the farmer a nett profit of 120 dollars. To which may be added the consideration of continual increase, by keeping them to any length of time. The advantage then in favor of raising sheep, rather than horses, is sufficiently proved by this estimate. And the immense and irreparable loss to individuals and the community, which attends the keeping of idle horses, should lead men to pursue a more rational course. It is unquestionably true from the premises, that the expenses of keeping one idle horse for an ordinary life time, say 20 years, would be 20 times 60, or 1200 dollars—a sum sufficient to buy your son a neat little farm, for ever lost. The same expense employed for the same term in raising sheep, would produce at least the same amount in absolute gain. The loss attendant on keeping an idle horse, should be added to the sum, which with the same money differently applied, might be gained—that is, 2400 dollars more. Then the fair conclusion, that the comparative advantage of raising sheep rather than keeping one surplus or unnecessary horse in 20 years, is 3,600.

Internal Improvements.

CANAL FROM BALTIMORE TO CONEWAGO.

[*Continued from page* 295.]

In regard to the geographical *extent* of country which must send its productions to market by the proposed canal, and be supplied by it in return with such commodities, as are wanting for its use and consumption, the commissioners present the following view, and they demonstrate its accuracy, by a well delineated map, accompanying their report—

"According to these principles, then, relative to the extent and influence of canal and river navigation, we will proceed to designate the boundaries of that tract of country, the commercial intercourse with which is now, in the *descending* line; and, when the proposed canal is complete, must be in the *ascending* line; and, in every way wholly and exclusively connected with the port of Baltimore. We will begin to trace this boundary from Mechanicksborg, near the line between Pennsylvania and this state; thence westwardly, including Shippensburg; thence to the Allegany mountain, beyond Bedford and Frankstown; thence northwardly, including Clearfield and Potter counties in Pennsylvania; thence, including Steuben and Tompkins, through Courtland, Chenango, Otsego, and Delaware counties, in New York thence, including Susquehanna and Luzerne, and through Schuylkill, Lebanon, and Lancaster counties, in Pennsylvania, to the Maryland boundary.—Within the line thus drawn round the navigable waters of the Susquehanna; and, which is evidently no more than barely of sufficient extent to embrace all the country from which produce is *at present*, sent to market down the Susquehanna, and which must always be dependent on that great river for all its commercial intercourse with any sea port whatever, there is included more than half the territory of the state of Pennsylvania, and a great portion of that of the state of New York.

"It has been computed, that the whole state of Pennsylvania embraces an extent of twenty-four thousand, five hundred square miles, or twenty-seven millions, two hundred thousand acres of land. The half of which, on an inspection of the annexed map of the Susquehanna country, and its practicable canal routes, on which we have laid down these boundaries just designated, it will be seen, is embraced within them; to which, it will also be seen, there must be added a portion of the state of New York, equal to six or seven counties of that state. Hence, it will appear, that according to a fair and impartial computation, the whole extent of the Susquehanna country cannot be estimated as containing less than about sixteen millions of acres; which is not far short of being three times greater than the whole state of Maryland together; which is computed at no more than six millions, nine hundred and twelve thousand acres. To those who have visited, or are well informed as to the general character of the Susquehanna country, it will be unnecessary to say any thing; and, to others, it will be sufficient to observe, in general, that this vast region, in point of fertility and excellence for all the purposes of agriculture, in fine climate, pure mountain air, and capacity to sustain a great and dense population, is equalled by few portions of this union, and surpassed by none. A very great portion of it is, as yet, but very thinly settled, owing no doubt, in part, to the vast tracts of vacant land in every direction, within our union, on which our people have been induced, by the various circumstances of advantage, fashion, or caprice, to plant themselves; but, as it has been justly observed, by a set of commissioners, appointed by the state of Pennsylvania, in their report of January 1790, "*the great obstruction and bar to the wealth and population of this western country, hus been the impassable falls in the river from Conewago to the tide.*" This country is yet in a great degree to be filled with population; the extent and nature of its resources are yet to be explored; and the amount and value of its commercial intercourse with the sea-port, with which it is, by nature, so strongly connected, have been only begun to be developed within the last twenty years; and cannot, therefore, as yet, be fully appreciated. But some idea of the immense amount to which the value of that intercourse would be, almost immediately swelled, on the opening of the proposed canal, may be formed, by adverting to the very great amount of the commodities which has of late been annually committed to all the imminent dangers of the river, in its present condition, and submitted to be dashed down from Conewago to tide, a distance of about seventy miles, in less than seven hours, by one of the most furious, perilous, and ungovernable torrents in the world.

"By adverting to the last census of the United States, it will be seen, that there was, at that time, seated within this great range of the Susquehanna country, as extended through the state of Pennsylvania into the state of New York, a population of not less than five hundred and two thousand, six hundred souls; composed, almost altogether, of free whites, and principally of industrious agriculturists; and that the whole population of the state of Maryland, including all descriptions, according to the same census, amounted to no more than four hundred and seven thousand, three hundred and fifty. The Susquehanna country being nearly one-fifth stronger, even in a numerical point of view, than the whole state of Maryland together. But the population, at present, seated within the Susquehanna country may be considered as among the most active, vigorous, and productive of any within our union; and, therefore, when we recollect the rapidity of the increase of population in every direction over the United States, where both soil and climate are friendly to human existence, it may be confidently predicted, that, at the end of twenty-five years from the date of the last census, there will be found within those limits, which we have designated as the Susquehanna country, a population of at least one million of souls; the great mass of whose exports and imports, to and from all foreign nations, can only be effected by means of the Susquehanna river, through that sea-port which shall be rendered most cheaply and easily accessible to its navigable waters; and, that access can only be effected, as we conceive, through the proposed canal from the port of Baltimore.

"It may startle the apprehension of some to find that we have approached, with the northern boundary of that which we designate as the Susquehanna country, so near to the grand Erie canal of New York, as to include the upper ends of the Seneca aud Cayuga lakes, which have been generally considered by the citizens of New York as forming properly a part of their great work. And this, in some respects, is true. But it is a first principle in all commercial operations, that all commodities will always be sent to market along that route over which they can be transported soonest and cheapest. It is a fact then, that the transportation down the river is accessible so much sooner, and is so much cheaper, than down the lake and the grand Erie canal, that, from twelve and a half to twenty-five cents more per bushel is given for wheat at the navigable points of Owego, Bath, &c. on the Susquehanna, to be sent down that river to Baltimore, than can be afforded for it any where on the lakes, to be sent to the tide. In consequence of which great quantities of wheat, and other commodities are annually sent across from those lakes, to the Susquehanna, and thence down to Baltimore.

"The costs and charges of navigating an ark of forty tons burthen, which is the average tonnage of those vessels from Owego to Conewago, a distance of two hundred and fifty miles, is about fifty dollars, and somewhat proportionally more or less, from any point higher up or lower down the river. But from Conewago, or Columbia, a distance, at farthest, of not more than sixty or seventy miles, by the river channel, to tide; the expense of navigating a similar ark down the torrent, (and with a burthen of more than fifty tons, no one will venture to descend,) is from fifty to seventy dollars. Thus constituting more than one half of the whole expense of navigating the river from any of its highest points; independent of the insurance, which to Conewago is nothing, or not more than one half per cent, but which from Conewago to tide is worth from seven to ten per cent on the value of the cargo; but on the proposed canal, from Conewago to Baltimore, the whole expense of transportation through, would not exceed half that amount. The proposed canal, then, would be the means of saving, in the descending navigation, one fourth in the expense of transportation from the most remote point, and all the premiums for insurance."

To the following extracts, we would invite particular attention, of the many whom we know have, without sufficient knowledge of, or reflection on the subject, expressed surprise, that it should be thought desirable to continue the canal on to Baltimore, after striking tide water at Port Deposit.—

"But, it has been asked with some degree of surprise, by many intelligent citizens; wherefore proceed farther with the canal after you have passed the great river obstruction, and reached such good tide navigation as that from Port Deposit and Havre-de-grace to Baltimore? This surprise seems to have been excited, and the inquiry to have been made from not adverting to the nature and object of canal navigation. The great object of all canals has been to open a communication by which bulky and heavy commodities can be *cheaply* and *readily water borne* from the place of production to the market or place of sale. And, it is quite obvious, that in attaining this object, every break in the continuity of the voyage of the canal vessel, every interruption in the passage, end every trans-shipment of the commodity must be attended with delay and expense; and, consequently, produce an addition to the price of transportation. It is from these considerations, as will be seen, on an inspection of the maps of the canal routes of all European countries, that all canals have been continued to a great market, sea-port, or place of sale and consumption. The same principles have governed in directing the route, and continuation of al the canals, that have been made in our own country; or where they have been disregarded or overlooked, the evil has been loudly complained of when it was too late to remedy the defect, but at a very great expense. The Middlesex canal in Massachusetts, instead of stopping at the head of tide, where the navigation is as good as could possibly be desired, of its kind, is carried along side of it four miles further into the harbour of Boston. The great Erie canal of New York is no where connected with the navigation of the river, by the side of which it passes, although it is in many places exceedingly good, and, for some distance above Albany, the canal passes just along side of the tide navigation. In speaking of the Potomac canal, Mr. Gallatin observes, that "the legislative impartiality which has required the canal to enter the river *at the very head of tide*, in order that Virginia may have an equal chance of becoming the depot of its commerce with Maryland, has very much injured its utility to the country at large." And, speaking of the James river canal, he observes, that one of its principal faults consisted in its not being continued down into the port itself, instead of being stopped at the upper end of the city of Richmond. The market for the produce brought down the Santee river is Charleston in South Carolina; and the river boats were obliged, at the mouth of the river, to enter the sea, and to reach that port by a navigation along the sea shore, for which they were not calculated. To remedy that inconvenience, and to insure a permanent navigation, a canal was opened. uniting the Santee with Cooper river, which empties into the harbour of Charleston. Thus it appears, as well from general principles as from experience, in our own country and in others, that a canal, in order to produce all the benefits expected from such navigation, must be continued down actually into the market or sea port.

But there never was a case, perhaps, in which the propriety of continuing the canal down into the very port could be sustained by more cogent and incontrovertible reasons and proofs, than that of the instance now under consideration.—It is perfectly obvious to every one, at all conversant with the nature of tide navigation, that the arks and boats by which any of our interior streams are navigated, are utterly unfit to contend with the winds and waves on the exposed deep waters of the tide any where along the seaboard; and, therefore, as we have seen, it has never been attempted where it could possibly be avoided. It is true, that for several years after the trade down the Susquehanna began to open, the bold enterprise of the boatmen of that river tempted them to put out upon the Chesapeake in their rude frail barks, with a determination, if practicable, to pursue their way to market; but the accidents, disappointments and losses, were soon found to be so very great, that all ideas of such perilous voyages were abandoned; and they are now never thought of or attempted. The cargoes of the Susquehanna river boats are now always trans-shipped, at Port Deposit, into bay craft, and sent thence, round by the Chesapeake to Baltimore. The proposed canal then, from the basin of Baltimore to a point opposite Port Deposit, may be considered as intended to continue, expedite, and facilitate the transportation of any commodities from the Susquehanna country, instead of stopping them at the head of tide, and sending them, thence, round by the Chesapeake. A fair estimate, therefore, of the conveniences and inconveniences of each, of the canal, and of the bay route, in some of the most important particulars, will place their comparative merits in the clearest point of view, and enable every one, at once, understandingly to decide which of them deserves the preference.

"The average tonnage of the arks, that descend the Susquehanna is, as has already been observed, about forty tons each. We will take the case of such an ark, and suppose her cargo to consist of one or other of the three most important productions of the Susquehanna country; that is, of coal, of grain, or of flour. By the way of the proposed canal, her cargo would reach Baltimore in a distance of forty miles; but, by the way of the Chesapeake bay, it would have to travel seventy miles. Allowing for every possible delay, any way incident to the mode of transportation, and the passage by the canal to Baltimore could be effected in two days; but at Port Deposit there would, on an average, be a delay of five days for getting a bay craft into which to trans-ship the cargo; and when that was done, the passage to Baltimore, on an average, could not be made in less than three days more; the delay and passage by the way of the Chesapeake would, then be eight days. We will suppose the toll to be, as in New York, graduated on the several commodities, passing on the canal, according to their respective natures, in bulk, weight, quantity, and value. Let us then set down the average of the three commodities of coal, grain, and flour, at one cent a ton, per mile; that will be forty cents a ton, or sixteen dollars for the whole cargo through to Baltimore. The freight on a canal has never been reckoned at more than a cent a ton per mile; which would amount to just sixteen dollars more; but in this instance, such an allowance for freight would be entirely too much; because the only additional cost to the ark, when moving on the canal, instead of laying still until sold, would be the hire of the towing horses and attendants, which could not exceed five dollars. The toll and freight of either of those commodities would not, then, exceed twenty-one dollars by the way of the canal; but, by the way of the Chesapeake, the freight on coal is one dollar per ton; on grain, it is one dollar seventeen cents per ton, or three cents per bushel of fifty-eight pounds, or what is called running measure; on flour, it is eight cents a barrel, or eighty-two cents a ton, averaging the barrels at two hundred and eighteen pounds each. To which must be added the cost of trans-shipping the cargo of an ark of forty tons, which is estimated at five dollars more; so that every forty tons of coal is charged with an expense, by the way of the Chesapeake, of forty-five dollars, every forty tons of grain with an expense of fifty-two dollars, and every forty tons of flour with thirty-eight dollars. We say nothing of waste, and deterioration by trans-shipping, of perils, &c. which might make these differences still greater. This comparative view of the relative advantages of the two routes from Port Deposit to Baltimore, will stand thus:

Canal.

Distance, ...	40 miles.
Delay and passage, . . .	2 days.
Freight and toll on forty tons of coal, grain or flour. . . .	21 dols.

The Chesapeake.

Distance, ...	70 miles.
Delay, trans-shipping and passage,	8 days.
Freight, &c. on forty tons coal,	45 dolls.
Freight, &c. on forty tons grain,	52 dolls.
Freight, &c. on forty tons flour,	38 dolls.

These advantages are perfectly obvious and decisive. And from this statement it is also clear, that with this continuation of the proposed canal from Port Deposit, no other market whatever can, with any thing like the same advantages, come in competition with that of Baltimore; because, to reach any other sea-port would require trans shipment at Port Deposit, additional tolls, exposures, delays, and the travelling a much greater distance by canal and natural navigation. But, if the proposed canal were to end at Port Deposit, or to have no locks, or communication, near that, with the river, by which it could be entered, all commodities brought down to the tide, at that place, over the bed of the river, must necessarily be trans-shipped, and might be taken to other markets which they might reach as conveniently, as soon, and at as little expense as the city of Baltimore, by the way of the Chesapeake. It is believed that, taking advantage of the most favourable floods, for some time after the proposed canal may have been completed, a considerable portion of commodities will continue to be taken down the bed of the river to tide; to all such, the locks at Havre-de grace, and the canal thence to Baltimore, would open and afford a most inviting, convenient, and safe mode of being transported directly, and expeditiously, to the city of Baltimore; one from which it is confidently believed no river vessel would willingly turn away, and send the commodities with which she was freighted to any other market whatever.

"The price of the transportation of wheat on the river from Owego, Bath, or any other point on the Susquehanna, in the state of New York, is about twenty five cents a bushel, down, and round to Baltimore; or, at the average rate of about one hundred dollars for every forty tons of all articles down to tide only; more than half of which is paid for the transportation on the river from Conewago to tide; independent of the risk, which is estimated as equal to from seven to ten per cent. But on the canal, the commodity would be exposed to no risk, little delay, and comparatively a small expense. Let us now extend the comparative view we have before exhibited, to the whole of the two routes from the head of the Conewago falls to Baltimore. Let us say, that each of the three articles of coal, of grain, and of flour, is charged with a toll through of one dollar a ton; and, that the freight of each ark would amount to ten dollars through; and, that the delay and passage would amount to four days on the canal. From Conewago to tide, by the river, the delay and passage may be set down at two days, and the freight and pilotage at fifty dollars for each ark of forty tons. The contrast between the expense of transportation on the two routes from Conewago to Baltimore, (apart from insurance) will stand thus:

By the Canal.

Distance, ...	93 miles.
Delay and passage, . . .	4 days.
Toll and freight through for an ark of forty tons, ...	50 dolls.

River and Bay Navigation.

Distance, ...	130 miles.
Delay and passage, . . .	10 days.
Freight, &c. on coal, . .	95 dolls.
Freight, &c. on grain, . .	102 dolls.
Freight, &c. on flour, . .	88 dolls.

Thus the proposed canal, when completed, would be the means of saving full one half of the present price of transportation from Conewago to Baltimore, on every forty tons of commodities brought down the river, from any point beyond the head of the falls: and would, therefore, be, in effect, offering a bounty to that amount for all commodities exported from the Susquehanna country, as an encouragement for their increase.

(To be continued.)

EQUESTRIAN PERFORMANCES.

RAPID TRAVELLING AND PRINTING.

The President's Message was transported from the Office of the National Intelligencer, to the Printing Office in Baltimore, distance thirty-eight miles, and there printed and published, all in five hours. This reminds us of some of the following Equestrian Performances.

Edit. Am. Far.

One of the earliest in the order of time, in England occurred in the year 1604, in the reign of James I. when John Lepton, Esq. Kenwick, in Yorkshire, who was one of his Majesty's grooms, undertook to ride five times between London and York, from Monday morning till Saturday night. He accordingly set out from St. Martin's le-Grand, between two and three in the morning of the 26th of May, and arrived at York on the same day, between five and six in the afternoon; rested there that night and the next day returned to St. Martin's le Grand, about seven in the evening, where he staid till about three o'clock the next morning. He reached York, a second time, about seven at night, from whence he set off again for London about three in the morning, and reached London between seven and eight. He set off again for York between two and three in the morning following, and getting there between seven and eight at night, completed his undertaking in five days. On the Monday following he left York, and came to his Majesty's court at Greenwich, as fresh and as cheerful as when he first set out.

In 1701, Mr. Sinclair, a gentleman, of Kirby Lonsdale, in Cumberland, for a wager of five hundred guineas, rode a galloway of his, on the Swift, at Carlisle, a thousand miles in a thousand successive hours.

In 1745, Mr. Cooper Thornhill, master of the Bell Inn, at Stilton, in Huntingdonshire, made a match, for a considerable sum, to ride three times between Stilton and London. He was allowed as many horses as he pleased, and to perform it in fifteen hours. He accordingly started on Monday, April 29, 1745, and rode,

	h.	*m.*	*sec.*
From Stilton to Shoreditch church, London, (71 miles) in .	3	52	59
From London to Stilton, in . .	3	50	57
From Stilton to London, in . .	3	49	56

Which was two hundred and thirteen miles in eleven hours, thirty-three minutes, and fifty-two seconds; and three hours, twenty-six minutes, and eight seconds within the time allowed him.

On Wedoesday, June 27, 1759, Jenison Shafto, Esq. performed a match against time, on New market Heath; the conditions of which were, he was to ride fifty miles (having as many horses as he pleased) in two successive hours, which he accomplished with ten horses, in one hour, forty-nine minutes and seventeen seconds.

In 1761, a match was made between Jenison Shafto and Hugo Meynel, Esqrs. for two hundred guineas; Mr. Shafto to get a person to ride one hundred miles a day (on any one horse each day) for twenty-nine days together; to have any number of horses not exceeding twenty-nine. The person chose by Mr. Shafto was Mr. John Woodcock, who started on Newmarket Heath, the 4th of May, 1761, at one o'clock in the morning, and finished (having used only fourteen horses) on the first of June, about six in the evening

The last week in September, 1781, a great match of four hundred and twenty miles in one whole week, was rode over Lincoln two mile course, and won by Richard Hanstead, of Lincoln, and his famous grey horse, with great ease, having three hours and a half to spare.

December 29th, 1786, Mr. Hull's horse Quibler, run a match for a thousand guineas, twenty-three miles in one hour, round the Flat at New-market, which he performed in fifty-seven minutes and ten seconds.

August 15th, 1792. To decide a wager of fifty pounds, between Mr. Cooper and Mr. Brewer of Stamford, the latter gentleman's horse, Labourer, ran twenty times round the race ground (exactly a mile) at Preston, in fifty-four minutes.

In October, 1791, at the Curragh meeting in Ireland, Mr. Wilde, a sporting gentleman, made bets to the amount of two thousand guineas, to ride against time, viz. one hundred and twenty-seven English miles in nine hours. On the 6th of October he started, in a valley near the Curragh course, where two miles were measured, in a circular direction: each time he encompassed the course it was regularly marked. During the interval of changing horses, he refreshed himself with a mouthful of brandy and water, and was no more than six hours and twenty one minutes, in completing the one hundred and twenty-seven miles; of course he had two hours and thirty-five minutes to spare.—Mr. Wilde had no more than ten horses, but they were all blood, and from the stud of —— Daley, Esq.—Whilst on horseback, without allowing any thing for changing of horses, he rode at the rate of twenty miles an hour, for six hours. He was so little fatigued with this extraordinary performance, that he was at the Turf Club House, in Kildare the same evening.

The expedition of the express, with the account of the drawing of the Irish lottery, for 1792, has never yet been equalled, as will appear from the following road bill of the third day's express, Nov. 15, 1792.

	m.		*h.*	*m.*
Holyhead to Birmingham .	163½	in	11	45
Birmingham to Stratford upon Avon	23½		2	4
Stratford upon Avon to London	105		7	45
	292		21	34

October the 14th, 1791, a trotting match took place on the Rumford road, between Mr. Bishop's brown mare 18 years old, and Mr Green's chesnut gelding, six years old, 12 stone each, for 50 guineas a side, which was won with ease by Mr. Bishop's mare. They were to trot sixteen miles, which the mare performed in fifty-six minutes and some seconds.

[*Sporting Anecdotes.*]

PROGNOSTICATIONS OF THE WEATHER.

Mr. Kirwan has laid down the following plan, from observations that have been made in England, during a period of 112 years; namely, 1677 to 1789, vide "*Transactions of the Royal Irish Academy*," vol. v. 1. When no storm has either preceded or followed the vernal equinox, the succeeding summer is in general dry, or at least so, five times out of six. 2. If a storm happen from an easterly point, on the 19th, 20th, or 21st day of May, the ensuing summer, will four times in five, be also dry. The same event generally takes place if a storm arise on the 25th, 26th, or 27th days of March, in any point of the compass. 3. Should there be a storm, either at south-west or west-south-west, on the 19th, 20th, or the 19th, 20th, 21st, or 22d of March, the following summer is *wet* five times out of six. In England, if the winters and springs be dry, they are mostly cold; but if moist, they are generally *warm;* on the contrary, dry summers and autumns are usually *hot;* as moist summers are *cold* Thus, if the humidity and dryness of a particular dry season be determined, a tolerably correct idea may be formed respecting its temperature. To these indications may be added the following maxims; which being the result of observations, made by accurate inquirers, may so far be depended upon as they will afford a criterion of the mildness or severity, and of the dryness or moisture of future seasons. 2. A moist autumn, succeeded by a mild winter, is generally followed by a dry and cold spring; in consequence of which, vegetation is generally retarded. 2d. Should the summer be uncommonly wet, the succeeding winter will be severe; because the heat or warmth of the earth will be carried off by such unusual evaporation. Farther, wet summers are mostly attended with an increased quantity of fruit on the white thorn, and dog rose; nay, the uncommon fruitfulness of these shrubs is considered as the presage of an intensely cold winter. 3. A severe winter is always indicated by the appearance of cranes and other birds of passage, at an early period in autumn—because they never migrate southward till the cold season has commenced in the northern regions. 4. If frequent showers fall in the month of September, it seldom rains in May, and the reverse. 5. On the other hand, when the wind often blows from the south west, during either summer or autumn, when the air is unusually cold for the season both to our sensations and by the thermometer; at the same time the mercury being low in the barometer: under these conditions a profuse fall of rain may be expected. 6. Great storms, rains, or other violent commotions of the clouds, produce a kind of crisis in the atmosphere; so that they are attended with a regular succession either of fine or bad weather for some months. Lastly, an unproductive year mostly succeeds a rainy winter; as a rough and cold autumn prognosticates a severe winter.

PRESERVATION OF FOOD.

A sea voyage, though it generally produces a good appetite, does not as often furnish the means of gratifying it; and a ship, either for comfort or luxury, is not usually the place where those, who attach value to such matters, can be accommodated.

Still all pleasures are comparative, and the accommodations, personal and gastronomic, of those who from whatever cause are at this day induced to venture on board ship, are so much increased beyond any thing known to the older time, that, in that sense, they may be truly said to be both comfortable and luxurious.

Among the wants which are most sensibly felt at sea, and which modern refinement and ingenuity have found the means of remedying, is that of fresh provisions In this respect, Messrs. Kensett and Daggett, of this city, have accomplished so much that they can put up fish, poultry, game, nay custards, so as to preserve them in any climate, and almost for any time, without any perceptible alteration in their original taste or quality. This is chiefly effected, we believe, by having them enclosed in tin cases, hermetically sealed. We are pleased to learn that the use of these provisions is becoming general, and have much satisfaction in presenting to the public the subjoined testimonial of Commodore Porter as to their excellence:

Copy of a letter from Com. Porter in answer to Messrs. Daggett and Kensell, of this city, respecting his opinion of their preserved fresh provisions.

"Washington, Nov. 13th, 1823,

"Gentlemen—Your letter of the 30th ult. should have been answered, at an earlier period but for unavoidable absence and a great press of business.

"I have given to your preserved meats a fair trial, particularly the beef and poultry, both for the Hospital department and as rations, as well as at my own table—and I have taken every occasion to recommend them not only to the officers under my command, but to others going to sea. I have taken some pains to bring them into general use in the Navy, and you may calculate on a favorable disposition on my part toward your establishment so long as, by your care and attention in putting up the provisions, you may have a title to it.

"Some of the provisions, which I took from New York last winter, are now on hand, and as good as the day they were received.

Very respectfully,
Your obedient servant,
D. PORTER.

Messrs. Daggett and Kensett,
616 Water street, New York."

FROM THE SCIOTO GAZETTE.

THE STEUBENVILLE WOOLLEN FACTORY.

This establishment, which has been in operation for several years, and has had to encounter the strong prejudices of the people in favor of every thing of foreign manufacture, seems, at length, to have obtained, in some degree, the high reputation to which it has always been justly entitled. The owners deserve great credit, not only for their financial skill in collecting the resources requisite to carry into operation so expensive an establishment, but for their perseverance in keeping it up under many imposing and not a few real embarrassments, until, it may with propriety be said, it has fairly *worn* itself into public favor. Such men are an honor to the state and to the country, and are entitled to something more than the mere *good wishes* of the people for their success. By their enterprise, many thousand dollars are annually brought into the state, retained and kept in circulation, which otherwise would soon find their way into the coffers of some English manufacturer. And no small quantity of the produce in the neighborhood of this factory, finds a ready market, and is consumed in the vicinity of the place where it is raised. These are direct general advantages resulting to no inconsiderable portion of the community.

Now we undertake to say that there is quite as great a difference in favor of our domestic cloths over those imported, as there is in favor of our domestic cottons over imported cottons. We speak with reference, more particularly, to the cloths of the Steubenville Factory; but we have no doubt the truth of the observation holds good as to every woollen factory in the United States established on the same liberal scale. Our domestic cottons *wore* themselves into repute; and nothing but a *fair trial* of our domestic cloths is necessary, to produce a similar conviction as to their excellence and the economy of wearing them altogether, in preference to foreigh cloths.

TO THE EDITOR OF THE AMERICAN FARMER.

IMPROVED BEE-HOUSE—*Description of an elegant one on a large scale.*

Laughlinstown, Oct. 17th, 1823.

Dear Sir,

You ask a description of my bee-house, concerning which, I owe you an apology for my remissness, in not answering your letter sooner: but being myself "as busy as a bee" all summer, as well as being conscious of an inability to describe it with sufficient clearness and accuracy, was the cause of my delay.

The bee-house is built about eight perches from my dwelling house, where a small bank afforded a good site for a stone foundation. The foundation is circular five feet in diameter in the inside, and six and a half feet high, rising eighteen inches above the highest part of the ground, into this a door opens so as to admit access into the house below the lower tier of hives. On this stands the bee house, which is ten sided, and eight feet diameter from outside to outside of the weatherboarding. It is eleven and a half feet high from the stone work to the eaves, from whence the roof rises like a cone supporting a staff in the centre, that is crowned by a vane.

The body of the house is formed by framing together ten planks of eleven and a half feet long, eighteen inches broad, and two inches thick, set upright on their ends at the ten angles of the house, deviating as much from the radius of a circle as is necessary to bring their sides at a right-angle, with a corresponding front, or face of the building. This is done for the purpose of admitting one square hive, and a triangular one into each space between the planks; thus making places for twenty hives in each tier, or circle, of which there are four, being eighty hives in all. The upright planks are tenanted into circular frame work of other plank, above and below; and the places to support the different tiers of hives, are made by letting inch boards into these upright planks, by a dove-tail; the whole is weatherboarded and painted. The hives are in the inside, and stand on sliders which have a tongue that reaches through a notch in the weatherboarding, for a place for the bees to light on. The point of these tongues, and likewise a circle above the bee holes, are painted with the several primary colours, so diversified that no two of the eighty are alike. The object of such diversity is that the bees will readily know their own hives.

The inside of the house is provided with circular steps that wind round a shaft, and are wholly unconnected with the walls. The risers of each step are morticed through the shaft, and supports the steps. The shaft itself has a gudgeon in each end that works in beam above, and in the floor below. Thus fixed, the whole stairs can be turned round so as to bring a platform, or landing place that is level with each tier of hives, opposite any particular hive that may be necessary to work with.

The hives themselves are plain boxes made with inch boards, either an oblong square of twelve by eighteen inches, or a triangular box, according to the place they are designed to occupy in the house. There are but two kinds of boxes in the bee house, which being all of one size and dimensions will fit in any part of it. They are six inches each in height, and two, three or four of them on each other, and covered by a lid, forms the hive. The main end and object of the whole is to take from the bees their surplus honey, without killing them, as is usual in the common method of managing that industrious and useful insect.

Very respectfully, your's,
JAMES CLARKE.

[In the valley of Ligonier, on the road to Pittsburg, we were struck with a neat and tasteful building, and being told it was a bee house, we ran to take a peep at the interior of it, while the horses were watering. The reader may form some idea of the quantity of honey which may be gathered in one of those valleys by the extent of preparations to accommodate that interesting insect, made by Mr. Clarke, and by him so kinkly and minutely described below.]

Edit. Am. Far.

QUERY—FEEDING OF STOCK.

Dear Sir,

The period is rapidly approaching, when farmers will have to feed their stock, and it behoves them to feed in a judicious manner, without running their provender too close. Now there is such contrariety of opinions on this subject, and which I have never seen in your valuable paper, that I now submit it to your numerous correspondents, who I hope will take it into consideration, as it is certainly of vast importance to the community at large. There is one method which I may say, most universally prevails, and that is, feeding in pens, and which cannot meet my approbation.

Your's truly,
A Friend to Agriculture.

J. S. Skinner, Esq.

Editorial Correspondence.

Oaken Grove, Jefferson Co. Geo. Nov. 22d, 1823.

Dear Sir,

I received your favour of the 2d September last, inclosing the parcel of wheat, and the sea kale seeds—accept my best thanks for the same. The seeds I have carefully sown, and will transmit the result of my experiments on the same, to you in proper time The corn crops in this section of the state, have this year, been abundant; though our cotton crops are light, caused by the severe drought in the latter part of the summer; and the rot which has prevailed much in many places. The many theoretic sketches on this subject, recently published—if practical, appear not to succeed, probably arising from want of judicious application.

You will bring under obligation many citizens in this part of the state, by requesting from some of your experienced correspondents, a description of the glanders, a disease incident to horses, with its various symptoms, together with the best known cure—as a disease called the glanders, is very destructive among our horses.

Respectfully your's, &c.
ROBERT LOWRY.

J. S. Skinner, Esq.

We will do it in our next—in mean time should be glad to hear from any correspondent on the subject.—*Edit. Am. Far.*

St. Mary's County, Nov. 20th, 1823.

Mr. Skinner,

Sometime since, a neighbour told me he saw published in your valuable paper, that a farmer in New York, made from one acre of land, one hundred and seventy bushels of Indian corn—it would be gratifying to ascertain whether the corn was or was not *shelled*, as the quantity to farmers in this quarter, exceeds any thing they can make. We thought that sixteen barrels and better than a bushel of shelled corn, was doing pretty well upon high land; this quantity was made by John Simms, Esq.; and it was measured in the presence of respectable neighbours, upon whose statement the greatest reliance may be placed. Mr. Simms' farm lies upon the Patuxent river, in St. Mary's county—and he crops upon a large scale.

PHILO-AGRICOLAS.

[The following letter from Mr. Middleton was not intended for publication, but as it contains some interesting information, we send it to the printer without fear of censure from the liberal writer.]—*Edit. Am Far.*

Charleston, 13*th Nov.* 1823.

Dear Sir,

You will receive herewith a paper parcel containing some Guinea grass seed; I do not know whether it will germinate, as it was imported the last year from the West Indies.—I will endeavor also, to procure you some of the seed grown the present year

My Tuscan cattle are doing well; I have ten half bred calves, and twenty cows, that will have calves during the winter. Our crops the present year are generally abundant. I do not know whether they cultivate in your neighbourhood the Guinea corn. It is very good food for man, hulled and boiled as rice.—Chopped up ear and stalk, it is excellent for animals—It is also used as food for poultry. A friend of mine made a hundred bushels to the acre; and if I mistake not, weighing 80 lbs. per bushel. Should you wish some of the seed I can supply you.

I am, Dear Sir,
With respect, your ob't serv't,
J. MIDDLETON.

TANNING.

We have always been under the impression that in England, hides remained in tan, from one to two years, and have heard the alleged superiority of English leather, attributed to the greater length of time it is undergoing that process.—It appears, however, by the following extract from the London Farmer's Journal, of September 29th, that it only takes from four to six months to tan, curry, dress and prepare the hide for sale—this shortening of the time is the effect of modern science, applicable to the process of tanning, as will be seen in our next

[*Edit. Am. Farmer.*

To the Editor of the Farmer's Journal.

ON THE PRICE OF LEATHER.

Kent, September 26, 1823.

Sir—I had some conversation this morning with my collar maker. He complains of the high price of leather, and that within the last six months there had been a considerable advance upon it, which led to the following questions:—

Q. What is about the usual price given by the tanners for a hide?—A. About sixteen shillings.

Q. What is the price of it after it has undergone the process of tanning and currying?—A. About five pounds.

Q How long does it require to dress, tan, curry and prepare the said hide?—A. From four to six months: formerly they gave it more time in the pits.

Now, Mr. Editor, through the medium of your Journal, I wish to elicit further information on this subject, as it appears to me (that now the duty is partly repealed upon leather,) there must be either enormous profits accruing to the tanner and currier, or they are at considerably more expense in carrying through this business than people are aware of. At all events, it is a question which interests the major part of the community.

I am, Sir, your's, &c.
INVESTIGATOR.

By the following it appears that one of our own most scientific citizens, has discovered an

IMPROVED METHOD OF TANNING.

The Gazette of last evening announces that Dr. H. H. Hayden of this city has discovered a very important improvement in the art of converting raw hides into leather, by means of a pyroligneous preparation, the use of which he has secured by letters patent, under the seal of the United States.

By this method, raw hides, of any description, after the usual process of *hairing* and *baiting*, are converted into excellent leather in less than *thirty six hours.*

Pyroligneous acid, or what may be termed *vinegar of wood*, is now to a considerable degree, and promises to be yet more extensively, applied to the preservation of meats. In a late English work, it is observed that "at the recent anniversary of the Whitehaven Philosophical society, two specimens of meat cured with the pyroligneous acid were exhibited by one of the members. They were prepared on the 7th of September 1819. One had been hung up at home and the other had been sent out by a vessel to the West Indies, to try the effect of climate upon it, and brought back on the return of the ship to that port. They were tasted by all present, and pronounced to be perfectly sweet, fresh, and fit for use, after a lapse of fifteen months."

On the subject of pyroligneous acid, its preparation and uses, as well as tanning in a practical view, we shall give some interesting extracts in early numbers, as these are topicks of general concernment.—*Edit. Am. Far.*

THE PASTIME OF DESPOTS.

The King of Prussia, in his correspondence with Voltaire, relates an anecdote of the Czar Peter, which is worth extracting, as illustrative of Russian despots:—"I knew Printz, the great Marshal of the Court of Prussia, who had been embassador to the Czar Peter in the reign of the late King. The commissions with which he was charged proving very acceptable, the Prince was desirous of giving him conspicuous marks of his satisfaction, and for this purpose a sumptuous banquet was prepared, and to which Printz was invited. They drank brandy, as customary with the Russians, and they drank it to a brutal excess. The Czar wishing to give a particular grace to the entertainment, sent for 20 of the Strelitz guards, who were confined in the prisons of Petersburg, and to every large bumper which they drank, this hideous monster struck off the head of one of these wretches. As a particular mark of respect, this unnatural Prince was desirous of procuring the Ambassador the pleasure, as he called it, of trying his skill upon these miserable creatures. The Czar was disposed to be angry at his refusal, and could not help betraying signs of his displeasure. This is not an invented tale: it is to be found in the narratives of M. de Printz, which are preserved in the archives. I have also mentioned it to many persons who were at Petersburg at the time, and they all attested its truth."

PARLIAMENTARY PROVISION.

In the Memoirs of the late Mr. Edgeworth, it appears that on his being appointed executor to a friend's will, he had necessarily occasion to write to persons indebted to the estate, requesting the discharge of the debts, which applications were, without a single exception, resented as insults, and uniformly answered by a challenge. Indeed, we collect from various anecdotes, that no greater or more unpardonable affront can be offered to a gentleman in Ireland, than asking him to pay his debts; it is looked upon as a most impertinent proceeding, and the only discharge a creditor has to expect in consequence, is the discharge of a pistol. Possibly, in contemplation of this frequent source of quarrel, and with the intention of striking at the root of it, the legislature has providently enacted, under the insurrection act, that any person asking for money shall be convicted as idle and disorderly. The following is the clause:—"And be it enacted, that if any person shall, within any proclaimed district, or within any county, any part whereof shall be so proclaimed, print, write, post, publish, circulate, send, or deliver, or cause or procure to be printed, written, &c. &c. demanding any money, any person so offending shall be deemed and taken to be an idle and disorderly person." This provision must have most effectually put a stop to the ungentlemanly practice of asking for money in certain parts of the sister kingdom. The executor or tradesman who so far forgets the rules of good breeding as to require a settlement of his demand, is speedily awakened to a sense of decorum by the words of the statute, and declared idle and disorderly!

FROM THE NEW YORK ADVOCATE.

PICKLE FOR BEEF AND PORK.

The following receipt for making pickle for beef or pork, is strongly recommended to the adoption of those who pickle beef and pork for family use. Persons in the trade, who will adopt it, will find a ready sale for their beef and pork. It has been used by many families in this city, and always approved. I do not hesitate to assert that there is no pickle in use to be compared with it. It is familiarly known by the name of the "*Knickerbocker Pickle.*" Could this receipt be generally adopted, our pickled beef and pork would have certain preference in the foreign markets.

RECEIPT.

Six gallons water, 9 lbs. salt, coarse and fine mixed, 3 lbs. brown sugar, 3 ounces salt petre, 1 ounce pearl ash, 1 gallon molasses to every 6 gallons water.

In making a larger or smaller quantity of pickle, the above proportions are to be observed. Boil and skim these ingredients well, and when cold, put it over the beef or pork.

AN OLD HOUSEKEEPER.

The use of molasses is recommended by Dr. Mitchill, in fattening cattle and poultry, which it increases in size, and communicates a fine flavour to their meat. [If given with *pan cakes*, as boys get it on Shrove Tuesday, would it not be still better?]

TRUTH AND YOUNG ROMANCE.

A SONG.

Young Romance through roses straying,
 Saw old Truth trudge lamely on ;
One in pleasure's light was playing,
 The *other* sigh'd for pleasures gone :
Cries Romance, " O rest a minute,
 And discuss our views of Earth :—
Yours may have most prudence in it,
 But in *mine* is all the mirth."

" Ah !" said Truth, " this world discloses
 Nought but vain delusive wiles,
Thorns are under all your roses,
 Sadness follows all your smiles :"
—Cries Romance, " Perhaps I often
 Colour life with tints too warm ;
Yet *my warmth* a *shade* may soften,
 While *your coldness* chills a charm."

" What is Love ?" the sage then asks him—
 " Love—in summer-hours so sweet ?
Winter weather soon unmasks him,
 And your idol proves a cheat !"
" Love !" the youth replies, " O sever
 Real love from vain deceits ;
Constant Love brings hours that never
 Lose their sunshine or their sweets."

" *Friendship*, too, you call a treasure,
 But," says Truth, " it is a tie
Loosely worn 'mid scenes of pleasure,
 And when fortune frowns—thrown by."
" Friendship," he replies, " possesses
 Worth which no dark change destroys ;
Seeking, soothing our distresses,
 Sharing, doubling all our joys."

" Go," says Truth, " 'tis plain we never
 Can such hostile thoughts combine ;
Folly is your guide for ever,
 While dull sense must still be mine."
Cries the Boy—" Frown on, no matter,
 Mortals love my merry glance ;
E'en in Truth's own paths they scatter
 Roses snatch'd from young Romance."

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 12, 1823.

☞ The Editor has it in contemplation, after the completion of this volume, to publish along with each Farmer, one half sheet or four pages *extra.*—These extra pages will be appropriated to the insertion of advertisements relating exclusively to such objects as Farmers and Planters are particularly concerned in—such as the sale of live stock of all kinds—implements of husbandry—household articles—real estate—fruit trees—seeds—overseers wanted, or wanting places, together with a complete account of the drawings of all the Maryland state lotteries, and a summary of passing news of general interest.—This extra half sheet, containing matter of transient consequence, will not be *paged*, and therefore need not interfere with the *binding* of the regular volume In the autumn of each year, it is proposed to send also to every subscriber *an Agricultural Almanack*—which besides containing what is found in ordinary almanacks, will furnish a number of valuable recipes and hints useful to the farmer, and especially to the housewife. In consideration of these additional offerings to our patrons, the subscription will be FIVE DOLLARS in all cases, and the Editor will guarantee the actual receipt of every number of the paper.

Great inconvenience has been found to result from the difficulty of procuring for remittance *four* dollars, and we are well assured, that a large proportion of our subscribers were willing to pay five, for the paper as it is ; but we have found it more agreeable to offer them *a full equivalent*, as we persuade ourselves we shall do by the proposed addition of four pages and an agricultural almanack.

* * *

☞ We are sorry to think it necessary to make any apology to our subscribers, for occupying a page or two of our paper, occasionally on the subject of CANALS, at points where they may form great thorough fares for internal commerce ; we say we are sorry, because it is obviously impossible that *every* article of a paper should be equally interesting in a *local* point of view to every reader—so it is obvions, that when we call the attention of farmers to a new, cheaper and more expeditious *road* to market, we thereby teach them, whereby they can save time and labour heretofore employed in *transportation*, to be now employed in *production ;* in other words we point out how they can increase the fruits, and generally, of course, augment the income of their estate. Now, how more appropriately can we employ *a portion* of an agricultural journal, than by exposing to the view of farmers, where, and how, and for what cost, and with what benefit such canals or roads to market can be opened !—and then, if these expositions apply only to Pennsylvania, New York and Maryland, to day, will the enlightened patron of Massachusetts and the Carolinas say, you have too much about canals, what care I for the Susquehanna canal ? no, he will reflect that what improves and multiplies the resources of a single state, adds strength and glory to the whole union—for we are emphatically *one people*. Suppose a citizen of Maine or of Georgia, in the best society of London or Paris, where the enterprise and powers and the enlightened application of the resources of nations, as displayed by their great public works, is the theme of discussion, would he not proudly point to the great works of New York, as the works of *his country*, the glory of *his nation ?* and if we speak *to day* of the Susquehanna canal, which touches "the pocket nerve," of a large portion of New York, more than half of Pennsylvania, and all Maryland, let our friends in other states remember, that we are as ready to turn to them and their particular interests, whenever the materials are presented for doing so.

* * *

☞ A JUDICIOUS APPOINTMENT—Never was there made a more appropriate selection, than that of GEN. S. VAN RANSELLAER, one of the best, and most unostentatious of men, and patriots—to preside on the *Committee of Agriculture*, in the House of Representatives.—It affords another proof of the knowledge of mankind, and the ready adaptation of talent and character to particular objects which characterises the official acts of the present able and discerning Speaker of that body. Agriculture, it will be admitted, is the most important concern which can attract the regard of the Representatives of a free and essentially agricultural community—one which ought to predominate, and control, *if there must* be subordination and subserviency of one class to another, in the order of human affairs ; but her advocates and followers are so dispersed, and possess so little, either of the means or the disposition to confer, for the concentration of their opinions, and the preservation of their power, that it may almost be said that there exists no such spirit, as an *esprit du corps* amongst them. Hence, while other particular classes, that live, and move, and have their being by the fruits of the plough, readily confederate to extend their influence, and to secure, by never ceasing importunities, both executive recommendation, and legislative protection to their peculiar concerns, Agriculture, alike unpretending and unobtrusive, either stands mute, or is heard as angels visit us, "rarely and far between." It follows that few measures are ever concocted, so to say, in the Agricultural Committee room, to engross much of the attention of Congress ; indeed, were other interests to engage no more of their attention, in proportion to their relative importance, and the population concerned therein, the Sessions of Congress would be shortened by two thirds of their present duration. The existing Committee on Agriculture, will probably have little else to do, than to act on the defensive ; to see that Congress in building up fences and providing special guards, to give artificia encouragement and protection, to other branches of industry, and to other institutions, does not trespass for their materials, on the rights and prosperity of the landed interest.

It must not be supposed that we are opposed to giving timely and suitable encouragement to domestic industry ; on the contrary, let it be done promptly and efficiently, and to any extent, when it can be so done as to augment the aggregate sum of social comfort and happiness—the only true and legitimate object of legislation. On this great question our little bark shall sail in the wake of the illustrious Helmsman, who guides with so much skill and honour our national ship. " I recommend, says he, a review of the tariff for the purpose of affording such additional protection to those articles, which we are *prepared* to manufacture, or which are more immediately connected with the defence and independence of the country."—What those articles are, " and to what extent this *additional protection*" should be carried, it is for the wisdom of Congress to say—all we mean to hint to our friends, the farmers, who are the consumers of imported commodities, and the true payers of the imposts is, that they should keep a bright look out. *Farmers bonds*, as far as we know, are cancelled only in one way, and that is by—paying them ; and it is easy to see that in a war of legislative, cut and thurst, were one to ensue between town and country, the concentrated few, and the dispersed many, where so much depends on acutenesss, union of forces, and perseverance,—the clodhopper would stand about the same chance of falling uppermost, as would a street-corner dandy, in a rough and tumble fight, with a half-horse-half-alligator Kentucky man.

* * *

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, white wheat, super., $6 75—Howard street, from wagons, $5 75—fine do. $5 25—Wharf, do. $5 50—White wheat, $1 12 a 1 15 to 1 20—Red do. $1 6 to 1 9—Lawler, $1 10 to 1 12½—Washington white, $1 12 to $1 20—Rye, 42 to 45 cts.—Old corn, 34 to 35 cts.—New do. 31 to 32 cts.—Wharf Oats, 33 cts.—wagon Oats, 37½ cts.—Beef, 6 cts. per lb.—Live Cattle, $5 to 5 50, per cwt.—Bacon, hog round, $10—Pork, $5 50 to $6 per c. lb. 6 to 8 cts. per lb.—Mutton, 4 to 5 cts. per lb.—Beans, retail, $1 25, cargo price, $1—Peas, retail, 62½ cts., cargo price 48 to 50 cts.—Red Clover Seed, $6--Orchard Grass do. $2 50—Herds' Grass do. $2---Timothy do. $4—Flax Seed, 75 to 80 cents—-Whiskey, from the wagons, 34 cents per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, No. 1, $6 very dull, No. 2, do. $5 do.—Herrings, No. 1, $2 25 per bbl., very dull No. 2, $2 do.—Fine Salt, 75 cents per bush., coarse, do. 70—Ground allum do. 68—Butter, (firkin) 12 to 13 cts. per lb.—Eggs, 12½ cts. per doz.—Hay, $15 per ton—Straw, $10.

Internal Improvements.

TUNNEL ACROSS THE RIVER THAMES.

To discover convenient and efficacious means for opening a spacious subterraneous communication between the shores of a great river, without occasioning any obstruction to the navigation, has long been a desideratum of considerable importance with the public, and in the estimation of scientific engineers. The difficulties which have opposed themselves to every attempt that has been hitherto made to execute a Tunnel under the bed of a river, have been so many and so formidable as to have prevented its successful termination in those instances where the attempts have been made.

To propose therefore the formation of a Tunnel after the abandonment of these several attempts, may appear somewhat presumptuous: on inquiring, however, into the causes of failure, it will be found that the chief difficulty to be overcome, lies in the inefficiency of the means hitherto employed for forming the excavation upon a large scale.

In the case of the drift-way made under the Thames at Rotherhithe in 1809, the water presented no obstacle for 930 feet; and when a great body of quicksand gave way and filled the drift, the miners soon overcame this obstruction, and were able to proceed until they were stopped by a second irruption, which in a few minutes filled it. Nothing comes more satisfactory in support of the system that is adopted here, than the result of the operations that were carried under that circumstance, to an extent of 1011 feet, and within 130 feet from the opposite shore.

It is to be remarked, that at the second irruption, on examining the bed of the river, a hole was discovered four feet diameter, nine feet deep, with the sides perpendicular;—a proof that the body of quicksand was not extensive; but what is most remarkable is, that this hole could be stopped merely by *throwing from above, clay partly in bags and other materials:* and after pumping the water out under a head of twenty-five feet of loose ground and thirty feet of water, the miners resumed the work, and proceeded a little further; but finding the hole at the first irruption increased, and the *filling* over the second very much sunk, the undertaking was abandoned.

The character of the plan before us consists in the mode of effecting the excavation, by removing no more earth than is to be replaced by the body of the Tunnel, retaining thereby the surrounding ground in its natural state of density and solidity.

In order so to effect an excavation thirty-four feet in breadth by eighteen feet six inches in height, the author of this plan proposes to have the body of the Tunnel preceded by a strong framing of corresponding dimensions, as represented in the accompanying drawings, and in the model proposed to be submitted for inspection. The object of this framing is to support the ground, not only in front of the Tunnel, but at the same time to protect the work of excavation in all directions. The body of the Tunnel, which is to be constructed in brick, is intended to be fitted close to the ground; and in proportion as the framing is moved forward, so the brick work is made to keep pace with it. But as this framing could not be forced forward all in one body, on account of the friction of its external sides against the surrounding earth, it is composed of eleven perpendicular frames which admit of being moved singly and independently of each other, in proportion as the ground is worked away in front. These several frames are provided with such mechanism as may be necessary to move them forward as well as to secure them against the brick-work, when they are stationary. It is to be observed, that six alternate frames are stationary, while the five intermediate ones are left free for the purpose of being moved forward, when required; these in their turn, are made stationary for relieving the six alternate ones, and so on. Thus the progressive movement of the framing can be effected.

In order that a sufficient number of hands may be employed together, and with perfect security, each perpendicular frame is divided into three small chambers, which may properly be denominated cells. By this disposition, thirty-three men may be brought to operate together with mechanical uniformity, and quite independent of each other. These cells, which are open at the back, present in front against the ground a complete shield composed of small boards, which admit of being removed and replaced singly at pleasure.

It is in these cells that the work of excavation is carried on. There each individual is to operate on the surface opposed to him, as a workman would cut out a recess in a wall for the purpose of letting in a piece of framing, with this difference only, that instead of working upon the whole surface, he takes out one of the small boards at a time, cuts the ground to the depth of a few inches, and replaces the board before he proceeds to the next. When he has thus gained from three to six inches over the whole surface, (an operation which it is expected may be made in all the cells nearly in the same time,) the frames are moved forward, and so much of the brick-work added to the body of the Tunnel. Thus intrenched and secure, thirty-three men may be made to carry on an excavation which is 630 feet superficial area, in regular order and uniform quantities, with as much facility and safety as if one drift only of nineteen feet square was to be opened by one man.

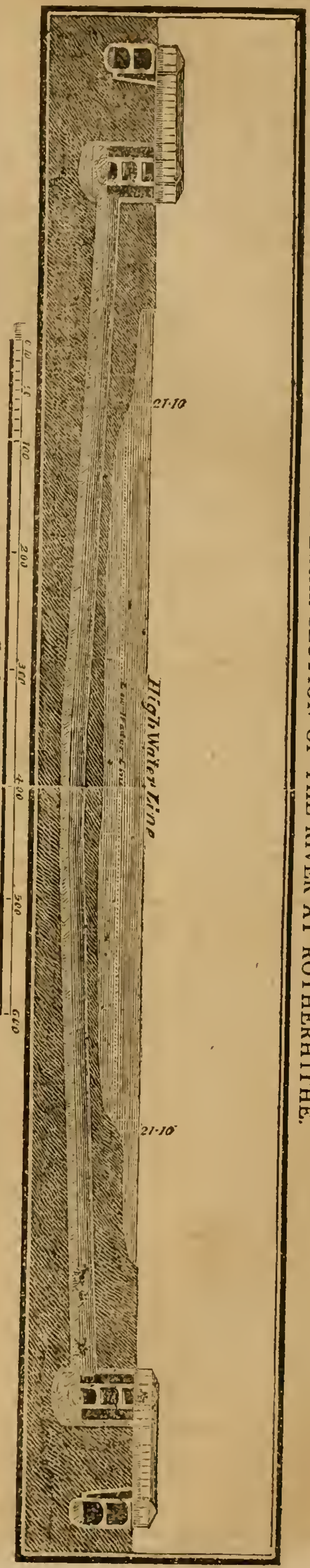
The drift carried under the Thames in 1809, which was about the size of these cells, and was excavated likewise by only one man, proceeded at the rate of from four to ten feet per day. In the plan now proposed, it is not intended that the progress should exceed three feet per day, because the work should proceed with mechanical uniformity in all the points together.

With regard to the line of operation, if we examine the nature of the ground we have to go through, we observe under the third stratum, which has been found to resist infiltrations, that the substrata to the depth of eighty-six feet are of a nature that present no obstacle to the progress of a Tunnel; we are informed that no water was met there. It is therefore, through these substrata that it is proposed to penetrate, and to carry the line that is to cross the deep and navigable part of the river, leaving over the crown of the Tunnel a head of earth of from twelve to seventeen feet in thickness quite undisturbed.

Admitting that in descendig to or in ascending from that line we should come to a body of quicksand, such as that which was found within about 200 feet from the shore, it is then we should find in the combinations of the framing, before described, the means that are necessary for effecting, upon a large scale, what is practised on a very small one, by miners when they meet with similar obstacles. Indeed, were it not for the means of security that are resorted to on many occasions, mines would inevitably be overwhelmed and lost.

Notwithstanding we may encounter obstacles that may retard the daily progress, it is with satisfaction we contemplate that every step we take tends to the performance and ultimate completion of the object; and if we consider that the body of the Tunnel must exceed the length of Waterlo Bridge, it must be admitted that, if, instead of two years, three were necessary to complete the undertaking, it would still prove to be the most economical plan practicable for opening a land communication across a navigable river.

No notice is here taken of the mode of constructing the descents or approaches into the Tunnel; because whatever form or direction it may be found



TRANSVERSAL SECTION OF THE RIVER AT ROTHERHITHE.

necessary to adopt, it is obvious that no difficulties oppose themselves to the accomplishment of that part of the work, the expense of which is however taken into account in the estimate.

Nature of the Ground under the bed of the River at the Rotherhithc, at a short distance below the place now proposed for opening a Roadway.

No.		Ft.	In.
1.	Stratum consisting of brown clay	9	0
2.	Loose gravel with a large quantity of water	26	8
3.	Blue alluvial earth inclining to clay	3	0
4.	Loam	5	1
5.	Blue alluvial earth inclining to clay mixed with shells . .	3	9
6.	Calcareous rock, in which are imbedded gravel stones, and so hard as to resist the pick-axe, and to be broken only by wedges . .	7	6
7.	Light coloured muddy shale, in which are imbedded pyrites and calcareous stones	4	6
8.	Green sand, with gravel and a little water	0	6
9.	Green sand	8	4
		63	4

AGRICULTURE.

[We have read with satisfaction the address of Jonathan Roberts, Esq. President of the Pennsylvania Agricultural Society—and we believe that our readers will peruse with much pleasure the extracts from it, which we give below. The whole address is worthy of its author, who has been known to the publick as an able Senator, a genuine Republican, and withal, a *working practical Farmer.* Few persons illustrate in their mind, deportment, and habits, the theory and operation of our free government, more happily than the author of this address; because, in him we see how accessible are the highest seats in the halls of power, to the plainest citizen, relying on his inherent energies and personal merit—and how totally unessential and inoperative are the accidental advantages of birth, and the hollow pageantry of wealth in a free government, where every man is *compelled* to advance himself, by advancing the interests of his country. Mr. Roberts has, like the venerable Pickering, literally alternated the duties of national legislation, with the labours of the plough, and the fatigues of the harvest field; performing all in their place, with honor. A considerable portion of the address has been omitted, because, though eloquent and interesting, as the first delivered before the society and, as it were, introductory, we have wished to consult the interest of our readers in general, by copying only the most practical parts, or such as are of general application. His suggestions in regard to imported raw productions, especially that of wool, are deserving of particular notice, and may induce the Committee of Agriculture to cut out some work for Congress.]

Edit. Am. Far.

ADDRESS, &c.

It is in vain to talk of producing much beyond what the market demands; that for which there is no sale, will hardly be cultivated; many of our products are in little demand, and hardly bear the expense of culture; can this state of embarrassment be relieved? is a question, the solution of which claims the sober consideration of the wisest heads. Much has been done for commerce and manufactures—but when has the agriculture of the middle states shared any benefit from national legislation?—Yet we have grown to be one of the most considerable agricultural nations in the world, and this portion is not behind in her productions.—This great national interest was well content to see commerce cherished as a pursuit that then needed it, and as a most valuable mean of prosperity; commerce then winged our products to every market. To us, then, every market was open.—In many markets, we are now forestalled, and this interest in her turn claims regard; it is time to harmonise and consolidate it; it will not seek the aid of bounties and premiums, but it has a right to the home market; it is in the power of the Congress to secure it without oppressing any other interest; the majority of the state and national representatives must ever be elected by those interested in the culture of the soil—their petitions must be secure of attention, and the legislative power, when it is proper, cannot be slow to interpose. Allow me to repeat that it is just, that those articles in which we abound, should be secured the home demand.—An accidental rise in the price at home, or depression abroad, cannot make the importation of such articles, a wise policy; we have, and must continue to have, a full supply of grain. Why then offer facilities for its importation. Countries which, perhaps, at no time grow sufficient for their own consumption, have found it necessary to protect the farmer against sudden depressions by importation. So far as consumption is concerned, absolute prohibition would seem the better policy. Wheat and potatoes of foreign growth have sold in our markets at good profits, when the products of our own soil would hardly repay the expense of cultivation. On nothing does prohibitory duties seem so strongly called for as the article of *wool.* By one of those changes in the affairs of nations, which rarely occur, the fine woolled sheep of Spain became transferred to our country;—we all remember at how much expense and some of us, perhaps, have to regret it. Practical men at length, became engaged in the growing of fine wool. This interest was at first checked by the large importation of woollen goods, immediately after the late peace with Great Britain. It had hardly begun to revive, when extensive importations of wool paralyzed the hopes of the farmer, and now seriously threatens the annihilation of this precious race of animals. For some time wool, the growth of the country, has not been exchangeable for money; the keeping of merino flocks under the best management is almost a total loss; I speak from actual experience. Prompt and effectual legislative interference is required for the preservation of this interest. No exertion ought to be omitted to secure so important an object; an encouraging bounty has long been secured to the growers of sugar, an article, which perhaps we have no means of cultivating to the extent of the home demand, while wool, an article we can produce to any extent, pays less duty on importation by one half than sugar. The best interest of the country loudly call for increased duties on foreign woollen fabrics, and onerous ones, at least, on the importation of the raw material. In the year 1816, our most successful manufacturers of cotton, despaired of producing goods at the India prices;—but in the short space of seven years, what astonishing facilities have been acquired in the cotton business, while the raw material is still at a good price. Our woollen manufacturers are fast following the success of our cottons, and the production of the raw material is little less important to the middle and eastern states, than the growing of cotton and sugar is to those of the south and west. It is not a high price that is needed to encourage the growth of wool, but a market at which it may be exchanged for money.

Farmers are deeply interested in having the inspection laws so executed as not to give a preference to the products of other states in our own markets, as well as those abroad. Time has been, when our superfine flour was preferred to that of the neighboring states; lately, however, that of New York and Richmond, and perhaps Baltimore too, has been in better demand than that of Philadelphia inspection. This inconvenience has not arisen from the want of good laws, but from a mistaken policy in executing them. It is especially the concern of the producers to keep the standard of inspection as high as that of our neighbors. A bad inspection may easily disparage our products, but it will be always found a difficult task to restore their credit. The raising a degraded inspection will be felt oppressive, and in the natural order of cause and effect, credit once lost cannot be regained until it may have been some time deserved. Almost every man knows the value of credit, both as it relates to men and things, though it may be often less real than fanciful.

The freedom enjoyed by our citizens in the choice of their occupations, forbids us at an early time, to look for large investments in the cultivation of the soil, for the mere object of profit. Centuries are perhaps to pass before our farms will be so expensively wrought, or so minutely divided, as in the best populated countries. Necessity only can press man so closely on man, and that necessity cannot early occur in so extended a territory. An exemption from the inconveniences of a dense population forms not the least valuable item in our rich inheritance. Too much *land*, however, brings inconvenience, as well as too little. Speaking practically, the size of a farm is best regulated by the consideration of what a proprietor can conveniently superintend personally. That description of persons called managers, are rarely to be met with amongst us. Most of those qualified to take charge of other people's business, prefer having it of their own. This fact is a gratifying proof of the freedom and happiness of our people.

The true point of excellence in practical husbandry, is as far as possible to make the farm fertilize itself. Not that it is bad economy to buy manure, but that the production of it is the only resource for the country at large. The collections from stables, and the streets of cities, are to be had in comparatively few places. In years past, the demand for produce at good prices, and favorable seasons, gave to farmers a return for their capital and labor that cannot now be looked for. Unproductive seasons have been joined to dull markets for several years. Light crops make lean barn-yards, and impoverished fields follow as a consequence. There is, however, room for an improved economy in the production and collection of manure. Lately a beginning has been made to convert the whole corn plant into a nutritious fodder, or most valuable addition to the savings of the barnyard. The advantages resulting from this method, it is to be feared, are too little appreciated. With less labor I have found it the best method of harvesting the crops; it is then cured with less liability to injury from autumnal rains. We may well doubt, whether we have learned the value of this magnificent plant; the crop is one of the most certain, and least exhausting to the soil, while it is one of the most productive, cheaply cultivated, and most useful:—by this crop our sward lands are best decomposed and mellowed. It forms an important item in the course of crops, that must constitute our best husbandry. It may be doubted, if the root cultivation would be held in such high estimation in Great Britain, if this plant could be matured there; here the root culture has been little resorted to as a mean for feeding stock; it is by no means certain, that the American farmer would find advantage in engaging deeply in this course of husbandry; crops of this kind can only be abundant on grounds heavily, and of course, expensively manured; they will generally require more labor than the corn crops; they are not easily secured from frosts in our severe winters, nor can they therefore be fed with perfect convenience. So far, however, as they can be used as food for cows giving milk, they form an excellent admixture with corn meal—but they fall much below the corn crops, in what they add to the savings of the barn-yard. The potato and the turnip are the only root crops I have had much experience in cultivating; I have found them both uncertain in their product, the former an expensive culture, and the latter of little value when abundant. Neither of them leave the soil in so good a state for a succeeding crop, as the corn plant.

In the course of twenty-five years experience, I have found summer fallowing a bad course of husbandry, even for a wheat crop, before the ravages of the insects made it so precarious a culture. By a course of corn, flax, oats or barley, wheat or rye, and clover, we have avoided fallows, and have been enabled to improve our soil.

Farmers can well recollect how beneficially gypsum was exhibited as a manure, and that in the course of eight or ten years after its general application, the clover afforded neither a wholesome summer pasture, nor winter fodder. Recourse was then had to the culture of the fibrous rooted grasses: an evident diminution of the ploughed crops followed. Of these grasses, timothy was found to be the most productive, but the most pernicious to the soil. It was recommended by its kindly commixing with clover, but with these qualities, it is in very little estimation at present among experienced farmers. The orchard, ray and herd grasses, appear to be entitled to no preference over the native grasses of our country; they do not afford so rich a sward for the plough.—The clover at present seems to have regained its original value. The cause of its deterioration or recovery, I pretend not to explain.

The use of gypsum for a while superseded the use of lime—during that period the soil became saddened and unproductive. A recurrence to its use promises the former results, an open and productive soil. The effect of lime on grass crops in this second trial, has been scarcely less visible and valuable than the effect of plaster when first applied. This precious mineral abounds throughout our country. It forms (limestone) an essential ingredient in restoring and improving the fertility of soils. Our farmers well understand this, and they now apply it to an extent and expense alike creditable to their enterprise and intelligence. But to realize its full benefit, it must be accompanied with moderate dressings from the barn-yard, at periods from seven to nine years. To keep grounds long in grass without plentiful top dressings will be found an unprofitable husbandry. I have experienced it to be advisable to plough the third or fourth year. The extent to be put under the plough, must be proportioned to the resources of the barn-yard or the manures obtainable. Ploughed crops will ever exhaust the soil, and the farmer should be prepared to retain or improve its fertility. Dressings from the barn door are never doubtful in their effects. Disappointment never results from their application. Casualties may mar the crop immediately following: but benefit is sure at last to be realized.

Farms have been made singularly profitable by the cultivation of grass, and their fertility greatly increased. In this middle region, however, grass farms are less likely to multiply than in the interior and remote settlements. Frumentatious crops must remain a leading object with farmers here. A good system of husbandry comprehends a varied cultivation, and the keeping of several kinds of stock. The farm is thus made more productive, less liable to accidental discouragements from unfavorable seasons and other causes, and a succession of employment is kept up through the year, with fewer occasions of pressure or relaxation.

We have been slow to substitute the labor of oxen for that of horses; but the value of the ox as a laboring animal, is becoming every day better understood. With us the habit of keeping large stocks of horses has become inveterate. The horse it is true is a burden-bearing, as well as a draught animal, which the ox is not. In small farms they cannot both be kept, and the horse is justly preferred. This reason will not hold in larger ones. It is not easy for those who have not witnessed it to conceive how much more cheaply the ox can be kept than the horse. When the former becomes unfit for labor his value is but little diminished. It is not so with the latter; he becomes useless. It should be our care to breed only good horses, diminish their numbers, and substitute oxen for the draught drudgery of the farm. We are too little acquainted with the sagacity and docility of this animal, and how profitably he can be employed. Our prejudices are strong against him. He is considered the emblem of dulness and inactivity. But his degradation is a consequence of our ignorance, inattention and neglect. The ancient Egyptians chose him as an emblem of deity—what an homage to his usefulness! I inherit nothing from my father I value more than the preference he taught me to feel for the employment of the ox; nor can I hope to leave a better inheritance to my children. Experience has convinced me he will perform as much labor as the horse—in heavy plough draft he is greatly preferable. The exhibition of his performances here will give him that estimation he deserves. The driver and himself will not continue to be the object of the world's dread laugh. He will rank with the farmer as one of his most valuable animals.

In practical husbandry the expense of labour is a cardinal consideration. Since the year 1818, farmers have very sensibly felt that labour has been much dearer than produce. We cannot speedily look for their equalization: a mitigation of this effect may be sought in some degree by improved implements. Those who have used the drag-rake can attest its value in lessening the expense, and facilitating the gathering, of that important article, hay. The revolving rake of Pennock and Peirce, is a most valuable improvement of that useful machine. An ingenious application of animal labor in the cutting of grass, has been effected. Of its practical utility I cannot speak, not having seen the machine in operation. If it can be adapted to common farm purposes, it would rank the inventor deservedly among the benefactors of his country. Nothing is more wanted than the application of animal labor in the cutting of grain. It is the business on the farm which requires the most expedition, and it is always the most expensive labor. Such an invention can be no easy task, or the ingenuity of our fellow citizens would, ere this, have effected it. But we have no right to despair, where there is not a physical impossibility. A liberal premium might well be employed to obtain such an object. Manual operations are greatly accelerated by properly constructed utensils. How much has been gained by substituting the steel hay fork, instead of those formerly used. The scythe is improving from year to year—not so with the sickle—thirty years ago it was better than it is now. Of all the utensils on the farm, the plough and the harrow are of primary importance. It is not very obvious that either of them are susceptible of much further improvement. It is desirable to ascertain, and bring into use, in the variety of existing models, those that will perform the requisite operations with the least possible force. This is within the range of our objects. The influence of habit is so strong, that it is difficult to get inventions into use, even when their utility had been demonstrated. How many years elapsed after steam power was applied to propel boats, before it could be brought into general use. He who succeeded in this will be better remembered than the discoverer. The rake drawn by animal power, is yet comparatively in little use. In no way can this society effect more good, than in accumulating and demonstrating, by actual operation, the utility of inventions calculated to facilitate the labors of husbandry and rural employments.

Household industry comprehends an essential interest in rural economy. It is the department in which the influence of that sex, to whom we are bound by the strongest ties of love and gratitude, is most conspicuous—it is the link which connects them with our exhibitions—it is the scene where the thrift, the ingenuity, the taste and intelligence of woman, has full latitude of operation. How many comforts, how many enjoyments are accumulated? how many endearments are secured, by raising her to her proper elevation? A community will be formed, refined, and happy, in proportion as woman is secure of respect. Employment is ever the shield of innocence, and the nurse of virtue. In a farmer's house it is the best maxim, *to make what you can*, even when foreign commodities are most depressed. Who would not prefer having their spinner, their dyer, their clothier, for their neighbors, rather than in a foreign land? Independently of all interested considerations, we must delight to cultivate an interchange of kindnesses and mutual good officers. How much mnst life languish where they are wanted? Our young people, who do not inherit farms, may in these pursuits commence life as heads of families, and end it as cultivators of the soil. But there are seasons in which the farmer needs their assistance in his business. They will be found ever ready to lend it. Agriculture must languish where it cannot, at intervals, bring tradesmen to aid in its labors. It is not in relation to the comforts of families only, that household manufactures deserve high regard and consideration: they are of essential importance to national prosperity. The community whose time is the most carefully and usefully employed, will be the most flourishing. Where there is no household manufactures, much time will be consumed to little purpose, and much expense must accrue, to purchase that which is not produced. The wealth sent abroad for foreign conveniences, as things now are, will slowly, perhaps not at all return. Thus the nation will become impoverished. National penury must militate against individual and domestic happiness. It is a point of sound policy, to nourish a taste for household manufactures—it is for the ladies to facilitate and effect their establishment. Teach them it is for their country's good, and they will do their duty. They will not be slow to learn, when their fathers, their husbands, their lovers, become their teachers.

But, gentlemen, I am too long delaying the closing operation of the occasion. The distribution of premiums, though the last will not be the least pleasing part of our duty; the more especially as they will fall where well deserved. This exhibition, I am happy to believe, has been gratifying, in a high degree, to all who have witnessed it. Such perfection in the form and qualities of animals, to be believed, must be witnessed. Our farmers cannot, will not, continue to nourish the inferior races, when so much better are obtainable. I cannot but think it is for the Pennsylvania Agricultural Society, in the close of their first year's labor, to have good reason to hope for a long career of usefulness.

I cannot omit expressing the high gratification the Society feel, in the evidence they have now received of the approbation of their fellow citizens, of the undertaking they have embarked in; nor of offering the sincere thanks of the Society to Mr. Evans, for his public spirited exertions to accommodate the exhibition; and to the gentlemen of the neighborhood, who have so hospitably co-operated with him. To the committee of arrangement, for their untiring diligence and the perfect success with which they have executed their arduous and delicate duties, as well as to the various committees of examination, and the gentlemen who have kindly afforded their services to assist them, the thanks of the Society are justly due, and sincerely tendered.

REPLY TO MR. LOWRY'S ENQUIRY

About the symptoms &c. in cases of Glanders, amonget horses, published in last Farmer.

GLANDERS.

A contagious disease, peculiar to the horse, the ass, and the mule. Glanders often attack horses that are in good condition, and so little is their general health sometimes affected by the disease, that I have often known glandered horses continue their work for four or five years without any interruption, except from lameness or other accidents. For more than ten years I have had the care of several teams of glandered horses, which were regularly worked from Exeter to Plymouth. Every precaution was of course observed to prevent mischief; detached stables were provided at every place where they halted; and the greatest care taken to prevent their having any kind of communication with other horses. The time a glandered horse continued fit for work varied considerably; in many instances, they have appeared strong, and worked regularly for four or five years; sometimes only a few months; most commonly, however, they lasted two or three years. They rarely died of the disease, for as soon as they became incapable of continuing their labour so as to earn the expense or value of their keep, they were destroyed.—The proprietor having a great number of horses working on other roads, whenever one of them became glandered, he was sent to the glandered teams, and by such recruits the strength of these teams was kept up for many years. It is worthy of remark, that when the superintendence of the horses, from which the glandered teams principally derived their reinforcements, devolved on a person who had been convinced by some decisive experiments that the disease was contagious, and who was scrupulously careful in separating a horse from others as soon as the slightest suspicion arose of his being infected, from that time recruits became more and more scarce, and it was found necessary, as a glandered horse fell off, to replace him by one that was free from the disease: at length very few glandered horses remained, and at this time there is not one left.—During the time I attended these glandered teams, I was employed for about two years by another proprietor of wagons, who also kept a glandered team: here the stables and general management of the horses were but indifferent, the work too hard for their keep and condition, that is, they were not fed so well, or in any respect so well treated as the horses before noticed; the consequence was, they increased rather than diminished, and became unfit for work in a much shorter time; many of them became farcied as well as glandered. The above circumstances are stated merely for the purpose of showing, that the following observations on glanders are grounded on experience; and it may not be improper to add, that, previous to this, the disease particularly engaged my attention, during the seven years I had the honor to serve as veterinary surgeon in the Royal Dragoons.

There are two kinds of glanders; the mild and the virulent, or the chronic and acute.—The symptoms of mild glanders are, a discharge of matter from one or both nostrils, and a swelling of the glands or kernels under the jaw. When the discharge of matter is from one nostril only, which is often the case, the glands on the same side only of the under jaw-bone are affected.—The matter discharged from the nostril is not of a whitish colour and cream-like consistence, as it usually is from an abscess, or from strangles; it has rather a glairy appearance, and sticks about the upper lip and exterior part of the nostril. The discharge is seldom so considerable as in strangles or violent colds. There is no cough, and the general health does not appear in any degree affected: the horse feeds well, is lively, and continues in good condition. On inspecting the nostrils, ulceration is seldom observed, nor has the matter which is discharged any offensive smell; yet this has by many been considered as a distinguishing mark of glanders. The disease often continues in this stage a considerable time, particularly when the patient is of a hardy constitution, was in good condition at the time he was attacked, and is not over-worked and badly fed. But when it attacks horses that are pent up in hot close stables, employed in violent exertion, and when over heated exposed to rain and cold winds, and particularly if worked beyond their condition and strength, the progress of the disorder is usually more rapid, and the first symptoms are generally of a formidable appearance; hence it is, that stage-coach and post horses are often so violently attacked, and that in such horses, the virulent or acute glanders, sometimes accompanied by farcy, are most frequently met with. In virulent glanders there is generally a considerable discharge often from both nostrils, and the glands under the jaw are much enlarged. The inner parts of the nostrils are commonly ulcerated, and when the matter has an offensive smell, or is mixed with blood, though the ulcers cannot be seen, there can be no doubt of their existence in the higher parts of the nostrils.—When the disease has become thus virulent, there is generally a falling off in strength and flesh, respiration is often impeded by the matter and ulceration within the nostrils, abscesses form in the lungs, and the horse sinks under the complaint. The disease is sometimes preceded by langour, weakness, loss of flesh, a dry staring coat and tight skin, and want of appetite. In this declining state the horse may continue two or three weeks; at length there is a copious discharge from the nostrils, the glands become enlarged, and the progress of the disease in such cases is generally rapid.

Method of distinguishing glanders from some other diseases which may be mistaken for it.—In catarrh or cold there is often a discharge from both nostrils; but it is attended with cough, dulness of the eyes, and general indisposition, which is not the case in glanders. In strangles, there is frequently a discharge from the nostrils, and a swelling under the jaws. Here also the discharge proceeds from both nostrils, the matter is generally of a whitish colour like the matter of an abscess. The swelling under the jaw is more diffused than in glanders, it is also tender, becomes gradually larger, and at length suppurates and bursts; soon after this happens, the horse gets well. Strangles are also attended with general indisposition, dulness of the eyes, and cough; and not unfrequently before the swelling suppurates, there is considerable difficulty in swallowing. Chronic catarrh or mesenteric consumption is often mistaken for glanders.—From sudden changes of temperature, that is, by suffering a horse to stand in a cold wind or rain after being heated by exercise, the lungs may be affected with a chronic kind of inflammation, accompanied by a similar affection of the mucous membrane lining the nostrils and windpipe. In this case the horse generally falls off in flesh and strength, the coat becomes dry and rough, and the skin sticks close to the ribs. The horse has commonly a tolerable appetite. There is a discharge of matter from the nostrils, and a swelling of the glands under the jaw. As the disease proceeds, tubercles are formed in the lungs, and the mesenteric glands become enlarged. The tubercles gradually increase in size, at length are inflamed and suppurate, the lacteals are completely obstructed, and the animal dies. (see *Consumption.*) This is usually the progress and termination of the disease when the animal is neglected, or often exposed to the cause which originally produced the complaint. There is often considerable difficulty in distinguishing the earlier stages of this disorder from glanders. In one circumstance, however, there is a material difference. The former has never been known, I believe, to be communicated to other horses standing and feeding with the patient; whereas it is a well established fact that glanders are contagious, as will be presently shown. This circumstance led me in a former publication (see vol. iii. *Veterinary Medicine*, p. 40.) to propose a *test* for distinguishing glanders from other diseases. Since that time I have given it a further trial, and the result has fully confirmed what was there said of it. The best mode, perhaps, of explaining this subject will be to relate the last case in which it was employed. March 23, 1816, I was desired to examine a mare that was said to have the strangles coming on: there was a considerable enlargement of the gland on one side of the under jaw, and a small discharge of matter from the corresponding nostril. The proprietor was informed that it was very unlike strangles, as there was neither cough nor dulness of the eyes: in short the mare appeared to be in perfect health and in good condition. The swelling was blistered and some medicine given.—About a fortnight after this I found the mare precisely in the same state; but about a week before I found that a pony, which stood next the mare, had had a discharge from the nostril and a swelling under the jaw for some time; but here the gland was not much enlarged, the discharge was inconsiderable, and he was in perfect health and condition. I discovered also, that the proprietor of these horses had lost a horse from glanders about twelve months before, but the place where this occurred was at a considerable distance from his present residence; and no kind of communication was known to have taken place between that horse and those now affected.—Another week elapsed, and no alteration was observed. The proprietor became anxious to ascertain whether it was glanders or not, as he was determined to destroy them if it proved to be that disease. As the mare was of considerable value, I proposed the *test*, which was assented to; and a healthy young ass about two years old was purchased for the purpose: a little of the hair, about the middle of the ass's neck, was cut off on both sides, so as to leave a bare space about the size of a dollar A small lancet was then introduced under the cuticle from above downward, but so as to cause a few drops of blood to appear; the same was done on the other side the neck. Some matter was then taken from the mare's nose and introduced by means of a small thin slip of wood, about the size and form of the lancet, into the orifice on the right side of the neck. Some matter was then taken from the pony's nose, and inserted with a fresh slip of wood into the orifice on the left side. The ass had no communication with the suspected horses, but was kept in a different stable, and had a clean bucket to drink from. Two days after the operation the inoculated part on both sides was swollen and very tender: the next day the swelling was found to have increased considerably, and corded veins, (lymphatics, see *Farcy*,) as farriers term them, were seen proceeding from the inoculated parts, on both sides. The scabs being removed, the inoculated parts were found to have become large foul ulcers of a peculiar appearance; these gradually spread. Small tumours resembling farcy buds appeared on the corded lymphatics; these burst and became foul ulcers. About a week after the operation, a discharge was observed from the left nostril, and two or three days after the glands under the jaw on the same side were a little swollen. The discharge from the left nostril and the swelling of the glands gradually increased, and in little more than a fortnight the animal was decidedly glandered.—There was not the least discharge from the right nostril, nor were the glands on that side affected. The ass was now destroyed. The membrane lining the partition of the nostrils on the left side was much ulcerated; on the right side there were no ulcers, but the membrane appeared redder than usual. There was a small quantity of matter in the left frontal sinus, and the honey-comb process of the ethmoid bone was highly inflamed. On the right side these parts were healthy. On passing the hand over the surface of the lungs, small tubercles were felt. The ass fed and drank well to the last; but the ulcers had spread considerably. In this case the constitution was more speedily affected than we generally find it to be. In some instances a month has elapsed, and in one case it was two months nearly, before the horse was decidedly glandered. A young ass appears to be the best subject for the experiment, being more readily affected than a horse. That glanders are a contagious disease, is, I believe, universally admitted by those who have duly investigated the subject. But Mr. Coleman, and many eminent practitioners, are of opinion, that it is often produced by other causes than contagion; particularly by sudden changes of temperature, and confinement in close stables. It must be admitted that glanders have often occurred, when it cannot be ascertained that the horse has any time been exposed to contagion; but it should be recollected, that he may have been inadvertently so exposed, that is, he may have been fed in the same stall, and been watered from the same bucket, which had before been used for a glandered horse; and it is an established fact, that a considerable time may elapse after the reception of the poison, before the glanderous symptoms make their appearance. When a sound horse was put into the glandered teams, I have several times noticed the length of time he remained free from the disease. The shortest time I recollect was between two and three weeks; more commonly it was from one month to two, and in some instances they have escaped it altogether. The last sound horse that was sent to the glandered team was about twenty years old, but of a hardy constitution. I have frequently examined him; and though he had, when I last saw him, been more than six months working and feeding with glandered horses, and drinking out of the same trough, he had not the slightest symptom of the disease. As to the manner in which glanders are communicated, there have been various opinions: I have proved, however, that it is not by any invisible vapours or effluvia that escape from the diseased horse, or by the glanderous matter being applied to the nostril, an opinion that very generally prevails. I have not, it is true, obtained any direct or positive proof from my experiments, that it is by swallowing glanderous matter the disease is communicated; yet there appears to be no other way in which it can be accounted for. According to Mr. St. Bel, the first professor of the veterinary college, "the virus (glanderous matter) mixed with a little flour, given to three horses for the space of a week, communicated the disease to the youngest in the space of a month; the two others did not sicken till some time after." I observed in the third volume of my *Treatise on Veterinary Medicine*, published nearly five years ago, "after having paid considerable attention to the subject, I have not been so fortunate as to discover a remedy for glanders; nor has it ever come to my knowledge, that any other practitioner has been more successful. Mr. Coleman has devoted much time and attention to the subject; I believe he has tried without success every method and medicine that he himself could devise, or that could be suggested by others. Many other practitioners have been no less industrious, and equally unsuccessful. With such authorities as these, I think no one will hesitate in admitting that the glanders have hitherto proved incurable." Since that time I have continued my attention to the subject, but have found no reason for altering my opinion. I have certainly heard of some *infallible remedies*, and have read a book, the professed object of which is to show, that glanders are not, as Mr. Coleman teaches, a disease "highly infectious," (Mr. Coleman says the disease is contagious, that is, propagated by contact,) "and to rescue from neglect and premature death a valuable animal, which in all probability under proper treatment might be preserved." This book contains *eight* prescriptions for glanders. The efficient medicines they contain have been repeatedly and unsuccessfully tried many years ago. In the first we have too or three drams of sulphat of copper (blue vitriol:) in the second there is an addition of half a dam of calomel: in the third one dram of calomel and half a dram of opium: in the fourth one scruple or half a dram of sublimate and one dram of opium: in the fifth half a dram or a dram of Ethiop's mineral (the usual dose is about an ounce) and half a dram of opium: in the sixth one dram of white arsenic and half an ounce of assafœtida: in the seventh two drams of arsenic, six drams of columbo root, and half a dram of opium: in the eighth two drams of sulphat of iron (salt of steel,) one ounce of bark, and half a dram of opium. *Qui vult, &c.* From what has been said on this subject it may be inferred, that the most effectual mode of prevention consists in separating a suspected horse from others; and being particularly careful, that sound horses have no possible opportunity of swallowing glanderous matter, which may be dropped upon hay or corn, upon the litter, or in a trough of water, or upon the manger, or parts of the stable which horses sometimes are apt to lick. The most effectual method of purifying a glandered stable is to cleanse it thoroughly, and fumigate it. (See *Fumigation.*) A more particular account of glanders may be found in the third volume of *Veterinary Medicine.*

From the Massachusetts Agricultural Repository and Journal, Vol. vii.

RINGING THE BARK OF FRUIT TREES.

Observations on, and details of, some experiments in ringing the bark of fruit and other trees and plants. By Joseph Sabine, Esq. F. R. S. &c Secretary. Read March 21, 1820.

The publication of the papers, on *ringing the branches of fruit trees*, by Dr. Nochden, in the second volume of the transactions, has directed the attention of several Fellows of the Society, and other persons, to the subject. The results of these experiments, which have been communicated to me, appear to be of sufficient importance to be collected together; as they will serve as guides to those who may wish to make further trials, and will assist in ascertaining the causes, of the variety of effects, which appear to attend the operation on different plants.

The practice of ringing or circumcising the branches of fruit trees, in order to make them yield more produce, is not novel; it is not stated to be so, in the papers alluded to; but though occasionally used, it does not appear that much enquiry has been made, to discover the most advantageous method, or the proper seasons, for performing the operation, nor have any reasons been distinctly assigned why it should be so particularly successful in some instances, and so entirely devoid of benefit, in others. The production of a greater crop of fruit, is the most important of the advantages expected to ensue from ringing: this increase must, of course, arise from an additional number of blossoms, and in some cases, from blossoms, that would not have existed in the ordinary course of nature, without the intervention of ringing: the formation of flowers, is therefore, the point to be looked to, in considering the application of the practice.—In those trees where the blossom buds are produced on the wood of the preceding year, it is not to be expected that the operation will have any effect on the quantity of produce, in the year in which the rings are cut; and it is on trees of this character, that ringing has been chiefly practised. On the contrary, in those trees which produce the flowers on the present year's wood, (though not much has yet been learned from experiment, with respect to them) the effect of the ringing will be seen immediately.

The interruption of the passage of the descending sap, by the incision in the bark, causes, in some cases, an alteration in the quality and appearance of the fruit. In many instances, in the first produce after the operation; it is considerably increased in size, on the ringed branches; it is also ripened earlier in the season, and that circumstance is accompanied, with very extraordinary improvement, in those colours of the skin, which indicate full maturity. Taking therefore into consideration the expectation of a change both in the quantity and quality of the fruit, it will be obvious that the spring is the most proper period to cut the rings ; the bark is then very readily detached, and the work may therefore be done with greater ease at that season. With respect to the width of the incision it must be recollected that the separation of the communication of the bark, in every case, though in some more than others, materially affects the health and vigour of the branch. As long as the separation is kept up,* so long may the formation of additional blossom buds be expected : but the restoration of the communication, which will be the consequence of the union of the bark, from the opposite sides of the ring, puts an end to the whole of that unnatural process, which the interruption had occasioned. It is therefore requisite, that the bark should be separated, nearly the entire season, in which the ring is made, more especially in those trees, where an increase of the succeeding year's bloom, is intended to be produced ; but it is not advisable, in any case, to keep the ring open for a long period ; the deposit of alburnum, at the upper edge of the ring, caused by the stoppage of the passage of the descending sap, increases the size and weight of the branch, in that place, so much, whilst the under part, remains of its original size, that it is very liable to be broken short off, at the ring, if the bark be suffered to remain long disunited.

Having taken this general view of the subject, I proceed to the consideration of the application of the practice to the different kinds of fruit trees, as far as my own observation, or the experiments of those with whom I have corresponded relative to it will enable me.

All apple trees form an abundance of additional flower buds, in consequence of ringing ; but if the ring be wide, the ringed branches, especially young ones, speedily become sickly ; it is therefore advisable, with them not to cut rings of greater width, than what will be closed up, at the end of the same season, or early in the following year ; besides, it seems that the improvement in size and beauty, is obtained chiefly in the first year of the ringing, therefore the rings of apple trees certainly should not exceed a quarter of an inch in width, on strong branches, and they should be narrower on small and weak shoots. Fresh branches on the same tree, ought to be annually ringed, and thus a succession of produce be uninterruptedly kept up.

Mr. Twamley of Warwick, exhibited, to the Society, in the autumn of 1818, some specimens which fully illustrate the practice of ringing apple trees. In the spring of 1818, he ringed several espalier trees, some of which were the Minshull crab, the Court-pendu apple, and the French crab ; the two former produced some of the most remarkable specimens of the kind, from the ringed branches, as to beauty, which perhaps were ever seen ; the colours being most brilliant, whilst the apples from the unringed branches of the same trees, had their usual appearance ; but the size of neither of these kinds was altered, whilst the French crabs from the ringed branches, were enlarged in an extraordinary degree, as well as improved in appearance. The same trees in 1818, had borne great crops on every branch, whether ringed or unringed ; but in 1819, they did not produce a single apple, except on a ringed branches, which then afforded a good crop, but the fruit, though very beautiful, were not so splendid in appearance as in the former year, and the French crabs were not larger than usual. Mr. Twamley has observed that the rings made in horizontally trained branches do not so readily close up as those on upright growing ones ; and he found an advantage in protecting the exposed part of the wood at the ring with grafting clay. Mr. Hunt of Stratford-upon-Avon, having observed Mr. Twamley's success, tried the same experiments with trees in his own garden, in 1819, particularly upon the Ribston pippin, the nonpareil, and scarlet nonpareil. He made his rings a quarter of an inch wide, at the end of April and beginning of May, and in the winter covered the open rings with clay and cowdung. The Ribston pippin filled up its rings more rapidly than the other kinds ; in consequence, as I suppose, of its being more vigorous in its general habit. The fruits of all in comparison with the produce from the unringed branches, were, exclusive of the additional quantity, either altered in size or in colour, but did not keep so well ; and Mr. Hunt thought them inferior in flavour, which is the natural consequence of the increase in size. The Ribston pippins, from unringed branches, were of a pale greenish yellow, and averaged eight inches in circumference ; those from ringed branches, were of a rich golden colour, with brilliant red streaks on the exposed side, and were ten inches in circumference. The nonpareil tree, (usually called the green nonpareil) was trained to a wall, and its produce, consequently, was all large ; but those from the ringed branches, were highly improved in colour, and measured twelve inches round. In the scarlet nonpareil there was no difference in colour,* but those from ringed branches, measured ten inches in circumference, while those from unringed branches, measured only eight.

Pear trees do not suffer so much from ringing, as apple trees ; the ring, though kept open, does not appear to induce weakness, so speedily : the ringed branches do not make shoots in such numbers, nor in such vigour, but they retain their health, sufficient for all purposes of produce, many years. Indeed, so little injury is done to pear trees by ringing, that several branches can be kept cut at one time, without danger, and a continuance of crop, may be ensured, by occasionally taking out a branch which may have become decayed, and replacing it with new wood. In healthy and clean shoots, the bark of pear trees, soon restores itself over the ring, unless it is cut very wide. The effect of ringing them is a certain production of blossom buds, so much so, that even young trees may be brought into bearing, by this means. Mr. Twamley, in the spring of 1818, ringed a branch of a young and luxuriant Jargonelle pear tree, which had been planted only two years ; the ring closed itself at the end of the summer ; but the branch next year blossomed and brought to perfection four good pears, (shooting vigorously also) when no other part of the tree showed the least appearance of bloom, and even in the present spring it shows two branches of blossom, which are the only ones upon the tree. Mr. Kemple mentions that he had increased the size of pear trees by ringing : this is most probable, but an instance of it has not occurred to my observation.

The branches of plum and cherry trees sustain injury and become cankered by ringing ; but as they are always free blowers, an increase of blossom by artificial means is not wanted to make them produce fruit. The same observation is applicable to peach and nectarine trees ; so that all the stoned fruits cultivated in this country must be excluded from the list of trees on which ringing may be usefully performed.

Vines are much benefitted by ringing ; their blossom is produced on the shoots of the same year, in sufficient plenty : for additional blossom, the use, therefore, of ringing, is not required, but increase of size, early ripening, and improvement of flavour in the grapes, all result from ringing. Mr. Williams, in a paper on the subject, in the first volume of the Transactions, has sufficiently described the mode of proceeding with the vines for this purpose.

In none of the experiments, the termination of which I have yet become acquainted with, has success attended the operation of ringing the Fig tree. The branches which have been circumcised have put forth on the young wood, abundance of small Figs, such being in fact, the flower of the tree, which subsequently enlarges and becomes the fruit, when ripe. This production of fruit has even been effected, in trees which had not attained sufficient age to throw it out naturally in the regular course, but in such cases, the crop has fallen off, without ripening. The branches of the Fig tree suffer by ringing ; the incision should, therefore, when made, be very narrow, to admit of speedy closing, it not being necessary for the production of the blossom, (which is formed on the young wood,) to keep it so long opened, as is required in other fruit trees.

The preceding are all instances of the effects of ringing in the production of fruit : but as these incisions in the bark cause the formation of flower buds, when none, or only a few, would otherwise have appeared, the practice may be extensively and usefully applied to ornamental shrubs and plants, which do not readily blossom. I believe this use of ringing has not before occurred to the advocates of the practice, and as I am acquainted with some cases of perfect success, it will be worth while to enumerate them, in order to induce to further trials.

Mr. William Baxter, gardener to the Comte de Vandes, at Bayswater, has given me the particulars of three experiments, made in the spring of 1818, which fully answered his expectations. The first was with a Waratah Camellia, which he had never been able to make flower ; he cut a ring round the stem ; so close to the root, that he was able to cover the incision with the mould of the pot, in which the plant grew ; the ring closed at the end of the year, and the plant remained in good health, but made rather short shoots, on which an abundance of flower buds were formed, and these blossomed perfectly in the following spring. The second experiment was on a plant of Aubletia Tibourbou, in the stove ; the ringed branch speedily broke into flower ; it was the first blossom which the plant had yielded, but its other branches did not blow ; the ringed branch is still alive, and its bark nearly reunited. The third experiment was on branches of Pyrus spectabilis ; those which were ringed produced last spring, abundance of splendid flowers, which were succeeded by ripe fruit ; and they are now again full of blossom buds, the other branches showing little promise of bloom.

In addition to the above, I can state, that one branch of the Passiflora alata, in Messrs. Loddiges' stove, was ringed, in 1818 ; in two months after it produced flowers ; it also did the same abundantly last year, whilst another branch which remained unringed, was entirely unproductive, in both seasons. Mr. George Loddiges, in giving me this account, mentioned, that he had tried the same experiment, with other Passifloras, and with some stove plants, but that he had not succeeded. His failure may probably in some cases be attributed to his having made the rings too narrow; in the soft stemmed plants, which he ringed, the bark would reunite very rapidly, and if the separation is not kept open, sufficiently long, the desired effect will not be produced.

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* *Since this paper was read to the Society, Mr. Williams, of Pitmaston, has mentioned to me, that a ligature on the branch, by a waxed string tied tightly round it, early in May, produces nearly the same effect of ringing. In this case, although the downward flow of sap, from the leaf is in some measure prevented, the alburnum is not injured by exposure to the air, and there is less obstruction given to the ascending sap, so that the health of the branch is preserved.*

* *The scarlet nonpareils from ringed branches, in Mr. Twamley's garden, were, however, much more brilliant in colour, than the other apples on the same tree.*

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Selections from late numbers of the London Farmer's Journal, received at the office of the American Farmer.

ON CUTTING GRAIN.

On Cutting Grain earlier than usual, in a letter from Mr. D. Wark, of Old Hall, Dunlop, Ayrshire, to Sir John Sinclair, 21st July, 1823.

Sir—I have lately observed a proposal by you, to the Highland Society, to inquire into "*The proper time of reaping Grain.*" I think it right, therefore, to send you an account of an experiment, which may throw some light upon that matter. It is the more necessary to attend to this subject, as people are often deceived by oats that had been hurt by the grub. In that case there are always suckers (as I call them) springing from the root, which often carry their heads above the ripe stalks, whose heads are heavy, and consequently fall down.

In 1822, I reaped a field of oats, in small lots, at so much per acre, as the same shall measure (which is the custom in this quarter,) and offered a small premium to the first five who cleared the ground in a fit state for the barn or stack. As was to be expected, some took the benefit of my premium, while others mocked it. "They had more sense (they said) than to destroy the crop for the trifle offered." However, they in general agreed to let me know the produce of their respective lots: I also reserved one lot to myself, which I cut nearly a week before any of the other lots. The field was of very equal quality, and the following was the produce in meal of ten different lots, of which I got a particular account from the buyer of each, besides the lot I had reserved to myself:—

Lot.	Day of cutting in September.	Bolls of Meal.	Firlots.	Pecks.	
6	3	8	3	3	Quantity of Meal in the lot first cut:— B. F. P. 8 3 3
4	9	9	1	3	Average of the six lots cut early:— B. F. P. 9 0 3½
3	9	9	1	1	
1	10	9	1	3	
12	11	8	3	3	
8	11	9	1	1	
11	11	9	2	0	
5	13	8	0	1	Average of the four lots cut last:— B. F. P. 7 3 1¾
7	13	8	0	0	
9	13	7	2	2	
13	14	7	3	0	

The lot cut on the 3d of September, the weather becoming very soft, was a little sprung, which lessened the produce.

The six following lots cut between the 9th and 12th of September were in fine condition, and very productive.

The four following lots were exposed to a heavy wind, and the loss thence sustained shows the danger of leaving a crop of oats to the mercy of the elements, after they are in condition fit for cutting, the loss being nearly two bolls per acre.

ANTIQUITY OF TREES.

In "*Major Rooke's Sketch of the Forest of Sherwood,*" are some very curious particulars concerning the manner of marking the age of the oak. In Clipstone Park, in Nottinghamshire is an oak called the Parliament oak, from a tradition of a Parliament having been held there by King Edward I. Near Blidworth, there is a large and ancient elm, called Langton Arbour, which even some centuries ago was sufficiently remarkable to give a name to one of the forest walks, and to have a keeper appointed to it.—Major Rooke tells us, that in cutting down some timber in Birkland and Bilhaugh, *letters* have been found cut or stamped in the body of the trees, denoting the King's reign in which they were thus marked. It seems that the bark was cut off and the letters cut in, after which the next year's wood grew over it, but without adhering where the bark had been cut. The cyphers are of James the First, of William and Mary, and one of King John! One of those, with James's cypher, was about one foot within the tree, and one foot from the centre: it was cut down in 1786. This tree must have been two feet in diameter, or two yards in circumference, when the mark was cut A tree of this size is generally estimated at one hundred and twenty years growth, which number, subtracted from the middle year of James's reign, would make 1492 the date of planting the tree. The tree with William and Mary had the mark about nine inches within the tree, and three feet three inches from the centre: cut down also in 1786.—The mark of John was eighteen inches within the tree, and something more than a foot from the centre: it was cut down in 1791: but the middle year of John's reign was 1207, from which, if we subtract 120, the number of years requisite for a tree of two feet in diameter to arrive at that growth, it will make the date of its planting 1085, or about twenty years after the Conquest. The tree, therefore, when cut down in 1791, must have been 706 years old, a fact scarcely credible; for it appears from the trees whose marks are better authenticated, that these exactly of the same size when marked, had increased twelve inches in diameter in 173 years, whilst this tree had increased no more than eighteen inches in 584 years. Major Rooke says, that several trees with this mark had been cut down, so that deception or mistake is scarcely possible. This accurate delineator accounts for these phenomena, by supposing (as the increasing wood never adheres where the bark had been taken off) that the sap which rises from the roots through the capillary tubes of the wood, to the branches, returns in its circulation between the *blea* and the bark. "I have often (says he) examined many of the ancient hollow trees in Birkland and Bilhaugh, and always found that where the bark remained, even on their mutilated trunks, there they frequently put out small branches with leaves; but where that necessary covering of the returning sap was wanting, there was no appearance of vegetation."

The keeper of a tap-room in Trongate, known by the name of "Charlie's Stable," has a dog of the Irish bull-breed called *Princey*, which is possessed of uncommon sagacity. The animal was so well trained when young, that it obeys its master in almost every thing he orders it, and is as useful to him as a servant. It is nearly three years since it began to carry his breakfast regularly every morning from the Townhead, by means of a tin can, the wire of which he holds suspended between his teeth. When the family flitted to Taylor-street, and then to Rottenrow-lane, the animal shifted his route from the High-street, and now takes the nearest route, by High John street, to accomplish his errand. He has never yet gone wrong in any thing intrusted to him. It would be attended with the greatest danger were any person, even in diversion, to attempt tn deprive him of his load, as he would probably sooner be killed than surrender. Nor will he accept the most favorite food when on business. He cautiously avoids any of his own species when he is on business; but if he cannot avoid it, he will disburden himself, give them battle, and then resume his load. Though what he carries be often of the most tempting description, the honest animal has never been known to make free with the smallest quantity, but faithfully delivers the articles untouched. He is frequently the bearer of letters between the family, and will carry any thing to the extent of half a stone. He brings every week from the market four or six pounds of beef, as occasion requires. When he returns home with his can, if the family are not in when he taps at the door, he retnrns back to his master, as he will enter no neighbor's house, nor intrust them with his can. When he is desired to gn for his master's hat or shoes, he will immediately do it. He will take a snuff-box, or other article, to such of the neighbors as he knows, and are named to him. He will take a bank-note to the tap-room, and bring back change in silver. He understands Gaelic as well as English, his master speaking and giving his commands, in both languages. He will take a man's hat off his head on being told to do so. He is uncommonly docile and quiet, and will, at the command of the children, leap over a stick four feet high, or dance for their amusement on his hind legs. The people are highly amused to see him skipping along with his daily load, but he will not stop to accept of any favors while he is on business.

Glasgow Chronicle.

[ENGLISH COURT OF CHANCERY—Let us copy her *with discrimination*]—*Edit. Am. Far.*

The Court of Chancery.—At the Nottingham meeting "the health of Mr. Williams" was proposed and drunk with "a speedy reformation of the abuses of the Court of Chancery." In this sentiment we believe every Englishman of every party will cordially concur. It is, (we know not whether unfortunately or fortunately)—but it is not upon the opponents of Ministers only that *that* direful Court lays its heavy hands. We would not, therefore, have the efforts for its reformation or abolition mixed up exclusively with the proceedings of meetings held for political purposes. An evil so transcendant—an evil which is absorbing the proceeds of public charities, and reducing the most respectable and virtuous subjects to beggary in the pursuit of their clearest rights—should become the object of direct and special exertions for its removal or abatement. We say nothing here of the Judge of that Court—we have spoken of him before. He, no doubt, decides, when he does decide, justly; he can have no motive to the contrary: but we do say, that men of talents and zeal for the good of a munificent country, have in all ages distinguished themselves by ameliorating the institutions over which they have been called to preside. The English Chancellor has been enriched beyond all belief or conception by the practices of his Court, which practices have, meanwhile, carried more ruin into innocent familes, *than all the gaming-houses* and *other haunts of vice throughout the kingdom put together.—Times.*

The bet between Lord Kennedy and Mr. Coke is for 200 sovereigns a side, who *kills and bags* the greatest number of partridges in two days' sporting. Lord Kennedy to sport upon any manors he pleases in Scotland, and Mr. Coke to sport upon his uncle's manors in Norfolk. Both parties to shoot on the same days, the 26th Sept. and 4th Oct. 1823. Mr. Coke, on the 26th Sept. shot upon the Warham and Wighton Manors adjoining to Holkham Park. He killed and bagged 86½ brace of birds; and on Saturday last he shot upon the Holkham, Egmere, and Quarles Manors, and killed and bagged 88 brace of birds. He was accompanied in the field by his uncle Thos. Wm. Coke. Esq. P. M. for Norfolk, and by Colonel Dixon, his umpire; and —— Blunt, Esq. umpire for Lord Kennedy. He was attended by several gamekeepers, with *one dog only* to beat for and pick up the birds. There were a great number of spectators. This match, from its novelty, and the celebrity of the sportsmen engaged in it, has incited a considerable degree of interest, and bets to a large amount are depending on the issue. No certain accounts have been received of the result of Lord Kennedy's first day's shooting.

Origin of eating Goose on Michaelmas-Day—Queen Elizabeth, on her way to Tilbury-fort, on the 29th of September, 1589, dined at the ancient seat of Sir Neville Umfreville, near that place, and as *British Bess* had much rather dine off a high seasoned and *substantial dish* than a *simple ragout* or *fricassee*, the Knight thought proper to provide a pair of fine geese to suit the palate of his Royal guest. After the Queen had dined very heartily, she asked for a half-pint bumper of Burgundy, and drank "Destruction to the Spanish Armada." She had but that moment returned the glass to the Knight who had done the honors of the table, when the news came (as if the Queen had been possessed of the spirit of prophecy) that the Spanish fleet had been destroyed by a storm. She immediately took another bumper, in order to digest the *Goose* and *Good News*; and was so pleased with the event, that every year after, on that day, she had the above excellent dish served up. The court made it a custom, and the people the fashion, ever since.

At the time of the plague in London, a noted body-searcher lived whose name was *Snacks.* His business increased so fast, that finding he could not compass it, he offered to any person who should join him in his hardened practice half the profits: thus, those who joined him were said to go with *snacks.* Hence going *snacks*, or dividing the spoil.

Mail Twelve Miles an Hour.—It is said, that a Mr. Banglis, of Birmingham, is offering, by means of a self-acting machine, which he has lately constructed, to convey the Royal Mail through the kingdom at the rate of twelve miles per hour.—*Leeds Mercury.*

Early Maturity.—The fat two year old Steer, and the yearling Heifer, which were shewn by Mr. Thomas, at the Scarsdale and High Peak Agricultural Meeting, held at Chesterfield on the 4th ult. were slaughtered at that place on Thursday last, by Mr. Silcock, the purchaser of the Steer, and Mr. Bower, the purchaser of the Heifer. The following are the returns of their respective weights:—

The two year old Steer's carcase, of 8 lbs. per stone, 122 stone 5 lbs; inside fat, 12 stone 6 lbs.

The yearling Heifer's carcase, 99 stone 3 lbs.; inside fat, 7 stone.

A MOTHER'S LOVE.

BY MRS. HEMANS.

—————— There is none,
In all this cold and hollow world, no fount
Of deep, strong, deathless love, save that within
A mother's heart—It is but pride, wherewith
To his fair son the father's eye doth turn,
Watching his growth. Aye, on the boy he looks
The bright glad creature springing in his path,
But as the heir of his great name, the young,
And stately tree, whose rising strength ere long
Shall bear his trophies well.—And this is love!
This is *man's* love!—What marvel! *you* ne'er made
Your breast the pillow of his infancy,
While to the fullness of your heart's glad heavings
His fair cheek rose and fell; and his bright hair
Waved softly to your breath—You ne'er kept watch
Beside him, till the last pale star had set,
And morn all dazzling, as in triumph, broke
On your dim weary eye; not your's the face
Which, early faded thro' fond care for him,
Hang'd o'er his sleep, and duly as Heaven's light,
Was there to greet his wakening! You ne'er smooth'd
His couch, ne'er sang him to his rosy rest;
Caught his last whisper, when his voice from your's
Had learned soft utterance; pressed your lip to his,
When fever parched it; hushed his wayward cries,
With patient, vigilant, never-wearied love!
No! these are *woman's* tasks!—In these her youth
And bloom of cheek, and buoyancy of heart,
Steal from her, all unmark'd!

TO THE EDITOR OF THE AMERICAN FARMER.

TANNING.

Annapolis, December 11, 1823.

MR. SKINNER,

In No. 38, of this Vol. you state that it only takes from four to six months to tan, curry, dress and prepare the hide for sale, in England. If this be the fact, it is contrary to the statute regulations of that country, which, like the laws of other nations, are often violated.

I have condensed the various statutes below, respecting tanning, which I request you to publish.

JAMES BOYLE.

No person shall tan leather, unless he has been an apprentice for seven years with a tanner, or he be the son of a tanner, &c. on the pain of forfeiting the leather tanned, or the value. 1. Jac. 1. ch. 22.

Tanners are prohibited from being curriers, and vice versa. Stat. 48, Geo. 3, ch. 60.

Tanners overliming hides, or using in tanning any thing but oak bark, ash bark, and culver dung, incur a forfeiture of the leather; and hastening the tanning of leather by unkind heats, are liable to a penalty of £10—and to stand in the pillory. *Hides for sole leather are to be in the noose twelve months, and upper leather nine months, or shall be forfeited.* 48. Geo. 3. ch. 60.

Shoemaker's making shoes of insufficient leather, are liable to 3*s.* 4*d.* penalty. 1. Jac. 1. ch. 22.

Red tanned leather, to be brought into open leather markets, and searched and sealed, before exposed to sale, and contracts for sale, otherwise to be void. 13. 14 Car. 2. ch. 7.

Many regulations are made to prevent the spoiling of hides and leather, by the flaying animals injudiciously. 39. 40. G. 3. ch. 66. 41. G. 3. ch. 55.

[We thank our friend for the above, and will give some interesting extracts, in regard to the theory and practice of tanning in our next.]

Edit. Am. Farmer.

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 19, 1823.

EASTERN SHORE CATTLE SHOW AND FAIR.

The Trustees of the Maryland Agricultural Society met in Easton on Saturday the 6th November, 1823—and adopted the following resolution:

Resolved, That a Cattle Show and Fair for the exhibition and sale of all kinds of Live Stock, Agricultural Implements and Household Manufactures, (with an award of Premiums) shall be held in Easton, in OCTOBER NEXT, under the direction and superintendance of the Trustees—of the particulars of which further notice will be given.

Resolved, That the above be published in the American Farmer, the Easton Gazette and Republican Star.

NICHOLAS HAMMOND, *President.*
S. T. KENNARD, *Secretary.*

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Flour, white wheat, super., $6 75—Howard street, from wagons, $5 75—fine do. $5 25—Wharf, do. $5 37½—White wheat, $1 12 a 1 15 to 1 20—Red do. $1 6 to 1 9—Lawler, $1 10—Washington white, $1 12 to $1 20—Rye, 42 to 45 cts.—Old corn, 35 to 36 cts.—New do. 35—Wharf Oats, 33 cents—wagon Oats, 37½ cts.—Beef, 6 cents per lb.—Live Cattle, $5 to 5 50, per cwt.—Bacon, hog round, $10—Pork, $5 50 to $6 per c. lb. 6 to 8 cts. per lb.—Mutton, 4 to 5 cts. per lb.—Beans, retail, $1 25, cargo price, $1—Peas, retail, 62½ cts., cargo price 48 to 50 cts.—Red Clover Seed, $6—Orchard Grass do. $2 50—Herds' Grass do. $2—Timothy do. $4—Flax Seed, 75 to 80 cents—Whiskey, from the wagons, 34 cents per gallon including the barrel—Apple brandy, 30 to 32 cts.—Peach do. 65 to 70 cts.—Shad, No. 1, $6 very dull, No. 2, do. $5 do.—Herrings, No. 1, $2 25 per bbl., very dull No. 2, $2 do.—Fine Salt, 75 cents per bush., coarse, do. 70—Ground alum do. 68—Butter, (firkin) 12 to 13 cts. per lb.—Eggs, 12½ cts. per doz.—Hay, $13 per ton—Straw, $8.

Employment Wanted.

The subscriber, a native of Scotland, and recently from Nova Scotia, wishes to procure a situation as Farmer. In this profession, he has testimonials to exhibit of his industry, and the experience of many years to recommend him—As he is a stranger in this part of the country, and out of employ, his expectations are moderate—a line addressed to JOHN ELLIS, care of the Editor, will meet with immediate attention.

Printed every Friday at $4 per annum, for JOHN S. SKINNER Editor, by JOSEPH ROBINSON on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

COMMUNICATED FOR PUBLICATION IN THE AMERICAN FARMER.

FIRST ANNUAL EXHIBITION AND CATTLE SHOW OF THE PENNSYLVANIA AGRICULTURAL SOCIETY.

The Directors in making public their proceedings, are glad to be enabled to state, that the result of their late meeting has equalled in every respect, their most sanguine expectations.

They had guarded against such irregularities as too often arise where incongruous multitudes are assembled, as it was their aim rather to prevent their occurrence by vigilance and precaution, than to repress them by the infliction of the penalties of law. They confidently believe, that nothing occurred to give dissatisfaction to the most correct and exemplary of the many respectable persons who were present. In the vast concourse of their fellow citizens who witnessed the scene, they had the most satisfactory, and decided evidence of public approbation, in support of their efforts.

The society earnestly desired, that the exhibition should be so conducted, as to attract the sanction of female countenance, for the important and interesting productions of household industry. In this wish they were gratified by the presence of many ladies, who heard the address from the President, and after assisted in the examination of some articles, upon which it was peculiarly their province to decide.

Various Agricultural Societies having been invited, the Presidents and Vice Presidents of the Societies of Brunswick and Bridgeton, of Buck's and Chester counties, the Secretary and other officers of the Philadelphia Society, as well as many distinguished strangers, from distant States, honoured the meeting by their presence.

The exhibition of stock comprised more than an hundred neat cattle, of the best and most costly foreign, and most useful native breeds;—an hundred and fifty sheep, with the various characteristics of English, Tunisian, Spanish and Irish origin, uniting in form and properties most hat can be desired in excellence of flesh or fleece—thirty horses, varying from the graceful figure of the fleet and high mettled courser of Arabia, to the heavy frame of the patient, and powerful draught horse of Pennsylvania. The Arabians, Grand Sultan and Grand Bashaw, obtained from the stud of the Bashaw of Tripoli, through the spirited and liberal exertions of our late Consul, Judge Jones, attracted universal admiration.

The exhibition of some of the implements of husbandry, was interesting not merely to farmers, from their usefulness, but to mechanics from the ingenuity and skill displayed in their construction.

Pope's Thrashing Machine, adapted to the force of one horse, confirmed the impressions, which had long since led the Society to recommend it, for the purposes of Pennsylvania Farmers.

Goodsell's simple and effective Flax Dresser, promises to be scarcely less useful, in rendering profitable the cultivation of hemp and flax in the middle states, than the famed machine of Whitney has been successful in aiding the production, of the great staple of those of the South.

Reading's Thrashing Machine excited attention from the ingenuity and simplicity of its construction; although, from its not having been properly adapted to horse power, it appeared to great disadvantage.

Mr. White's plough, in turning with great neatness, a furrow of stiff sward, six and a half inches deep, and sixteen inches wide, required a draught of 616 pounds.

Mr. Stevens' plough, in turning a furrow six inches deep, and eleven inches wide, of the same sward, with equal neatness, required a draught of from 420 to 448 pounds.

Mr. Suplee's plough required a draught of 532 pounds, in turning, with great accuracy, a furrow, six inches deep, and thirteen inches wide, of the same land.

Bergen's "self-sharpening plough," made by Mr. Evans, in turning a furrow of the same sward, seven inches deep, and thirteen inches wide, required a draught of 728 pounds.

Mr. Nixon, of New York, exhibited his patent ploughs, harrows and cultivators, which do credit to his skill, and to his workmen. The ploughs appeared to be fitted rather for fallow, than sward land.

Mr. Hoopes, of Philadelphia, brought a plough which has for some time been used in this State.

Mr. M'Conaughey, exhibited his cultivator and his corn harrow; for the latter he took a premium.

Mr. Blight sent a Yorkshire root cutter, cheap, simple and effective.

Mr. Powell exhibited his cultivator and his Dibbling wheel, which were remarked, as fitted to save much labor in the cultivation of root crops, and also Beatson's improved Scarifier, well constructed for the production of fine tilth.

Mr. Pennock produced a revolving Horse-rake, and his Chaff Cutter, not unworthy of the ingenious inventor, who has contributed so largely to the improvement of farming implements.

Mr. Hoopes of Downingtown, showed a new modification of the Horse-rake, which has been much approved by the farmers of his neighbourhood.

Mr. John Beever presented a Winnowing Mill, which is an improvement upon the wheat Fans in general use.

Mr. Williams's horse hoe, expanding harrow, and double mould board plough, although last in the list, were not the least worthy of notice.

The late organization of the society prevented the publication of their premiums, sufficiently early, to excite competition for the prizes offered for winter crops and household manufactures, so extensive as the good management, zeal and industry of the inhabitants of the fertile counties associated under the law, had led them to expect.

The decision upon claims for Indian corn, and root crops, has been necessarily deferred until their harvest shall have been completed.

Mr. Joseph M. Downing presented to the Society some bottles of gooseberry wine, showing that an excellent substitute for some of the wines of Europe is within the reach of most farmers, who have not the means of cultivating grapes.

The well contested trials of horses and oxen at the plough, contributed not a little to the interest of the scene; and it was a source of congratulation, that neither the emulation of the competitors, nor the anxiety excited among a vast concourse of spectators, interrupted in any shape the good order, good conduct, and good feeling which pervaded the whole.

NEAT CATTLE.

To the Directors of the Pennsylvania Agricultural Society.

The Committee on neat cattle, having given their most diligent attention to the duties assigned to them, submit their report, and recommend the award of —

The first premium for bulls, not more than six, nor less than two years old to Mr. Alexander Reed, of Washington, Pennsylvania, for his short-horn bull, bred by Mr. Powell, from a native cow, by the imported Durham short horn bull Denton,	$50
The second premium to Mr. Joseph Kersey, for Oakes, by the imported Durham short-horn bull Cœlebs,	20
The third premium to Mr. Aaron Clement, for Roderick, bred by Mr. Powel, from an half bred Teeswater heifer, and Mr. Tomlinson's bull Major,	10
The first premium for bulls, not more than two years old, to Mr. Henry A. Carpenter, for his Durham short-horn bull Lothario, bred by Mr. Powel, from the imported cow Moss Rose, and the Durham short-horn bull George,	30
Relinquished for a medal.	
The second premium to Mr. Henry A. Carpenter, for Leopold, from Moss Rose, by Mr. Powel's half bred Bull Rob Roy,	15
The third premium to Mr. George Sheaff, for Highlander, from Queen, by Mr. Powel's Rob Roy,	10
The first premium for Cows, not more than seven, nor less than three years old, to Mr. Benjamin Serrill, for his Kentucky cow Kate, derived from Mr. Parkinson's importation of short horns, and Gough's breed,	30
The second premium, to Mr. Henry A. Carpenter, for Prize by Denton,	25
The third premium, to Mr. John Serrill, for Meadow Maid, from Mr. Benjamin Serrill's cow, by Mr. Powel's George, of Teeswater blood,	10
The first premium for heifers, not more than three, nor less than one year old, to Mr. Smith, for Lucy, from a fine native cow by Mr. Tomlinson's bull Major,	20
The second premium, to Mr. Serrill, for Red Beauty, from his cow, derived from Mr. Ketland's heifer of Durham short horn blood,	10
The third premium, to Mr. Benjamin Serrill, for Violet, from Kate, by Mr. Powel's bull George, of Teeswater blood,	5
The first premium for heifers, not more than twelve months old, to Mr. Smith, far Sophia, by Mr. Powel's Rob Roy, from a Kentucky cow, derived from Mr. Parkinson's importation of short horns and Gough's breed,	20
The second premium to Mr. George Sheaff, for Diana, from Steamboat, by Mr. Powel's half bred bull Rob Roy,	10
The third premium to Mr. Joseph Kersey, for Fill Pail, from a native cow by Oakes,	5
The premium for the best ox, not more than nine, nor less than three years old, to Mr. Benjamin Serrill, for his brindled Ox, bred by himself,	15
The premium for the best steer, not more than three nor less than one year old, to Mr. Henry Serrill, for his steer Durham, bred by himself, from a cow descended from Mr. Ketland's Durham short horn heifer,	10

The following stock was exhibited, all possessing great claims to notice.

The committee very much regret that they cannot reward the owners of more of these fine animals by premiums.

Your committee are not directed to give their opinion upon such animals as have not been offered for premiums, yet they cannot forbear noticing the neat cattle which Mr. Powel has exhibited, although he has declined contending for a prize. His "Improved Durham short horned" cow Flora, of 5 years, and her remarkable calf Hebe, of 8 months by Rob Roy, particularly attracted their attention, and proved the justice of the award, which, at a former exhibition near Philadelphia, had given to the dam the first premium. His white heifer Fairy, of three years by the thorough bred "Improved Durham short horn" bull Denton, from Prize, a half blood heifer, was marked by the strong points of the improved Durham stock.

His imported short horn heifer Cora has many of the best characteristics of her race.

Yorkshire, of 3 months, from Cora, by the Durham short horn bull, Lothario, has the fine shape and good points of his sire.

Europa, from the imported cow Assurance, begotten by Mr. Curwen's bull General, has some very good points which show her claims to the high pedigree of the dam and sire, traced in the Herd Book to the year 1777, yet she exposes the effects of very bad keep and to early breeding before she was brought into this state.

Julia, of 3 years, has good form, with the marks of high breeding, but betrays the. defect of Devon blood.

Laura, an imported heifer, of 2 years, has all the characteristics of deep-milking, and carries proof upon her carcase of tendency towards fat.

Flirt, of 3 year, from Julia by Denton, has good size, fine head, neck and bone.

Sussex, of 12 months, from Laura, was begotten in England, has long frame, small bone, head, horns and neck, and very strong points of high breeding.

Your Committee decidedly think, that in blood, points, and all the characteristics of fine neat cattle, Mr. Powel's breeding stock were generally superior to any on the ground, and had not Mr. Powel declined it, some of them would have been decidedly entitled to the first premiums.

Mr. John Tomlinson's seven heifers were marked by some of the good points of Holstein blood.

Mr. John M. Justis exhibited a large and well formed cow from Kentucky, also a one year old steer, with good frame and points.

Mr. Aaron Clement, two cows, two heifers and a three year old steer, of good shape and size.

Mr. Smith, two large cows from Kentucky; and a fine two year old heifer, by Mr. Tomlinson's Major.

Mr. Benjamin Serrill, two remarkably large and well shaped steers, of four years, and one of a year, bred by himself, as well as three Kentucky cows, with strong points.

Mr. Henry Serrill, one large four year old steer.

Mr. Smedly, a very good three year old steer.

Mr. George Blight, an heifer of one year, bred by Mr. Powel, from Star, an half blood heifer by Denton, showing fine points.

Mr. James Hickman, two large fat oxen worthy of particular notice.

Mr. George Sheaff, four cows, large and fine, two heifers under one year, one of them from an inferior common cow, by Mr. Powel's Rob Roy, showing by her excellence the great advantage of crossing with the improved stock; also, the Bull Tom Jones, which took a premium at a former agricultural exhibition.

Mr. John Serrill, two very pretty twin heifers, one year old.

Mr. Robert Clement, a well formed and very fat calf, five months old, by Mr. Kersey's Bull Oakes from an inferior native cow.

Mr. Malachi Park, a large 3 year old cow, and a bull 16 months old.

Mr. Charles J. Davis, a bull and heifer of 18 months, worthy of notice.

THOMAS SMITH,
THOMAS SERRILL,
JOHN TOMLINSON,
MATTHEW ROBERTS.

SHEEP AND SWINE.

To the Board of Directors.

The committee appointed to examine Sheep and Swine recommend the following premiums to be awarded—

The first premium for Rams not more than two years old, to Mr. John Barney, for his Ram of Dishley blood,	$10
The second to Mr. Aaron Clement, for his Ram of Dishley blood,	5
The third to Mr. Joseph Kersey, for his Ram of Dishley blood,	5
The first premium for Ewes not more than two years old, to Mr. Joseph Kersey, for his Ewe of Dishley blood,	10
The second to Mr. Francis Hickman, for his Ewe of Bakewell and Irish blood,	5
The first premium for Rams not less than two years old, to Mr. Aaron Clement, for his Ram of Dishley blood,	10
The second to Mr. Aaron Clement, for his Ram of Dishley blood,	5
The first premium for Ewes not less than two years old, to Mr. Joseph Davis, Jr. for his Ewe of Dishley blood,	10
The second to Mr. Daniel Case, for his Ewe of Dishley blood,	5
The premium for the best Ram of Dishley breed not more than two years old, to Mr. Joseph Kersey,	10
The premium for the best Ewe of Dishley blood not more than two years old to Mr. John Barney,	10
The premium for the best Ram of Dishley blood not less than two years old to Mr. John Barney,	10
The premium for the best Ewe of Dishley blood not less than two years old to Mr. Aaron Clement,	10
The premium for the best Merino Ram not more than two years old to Mr. Thomas Serrill,	10
The premium for the best Merino Ewe not less than two years old to Mr. John Hare Powel,	10
The premium for the best Merino Ewe not less than two years old to Mr. John Hare Powel,	10
The premium for the best broad tail Ram of Tunisian blood not more than two years old to Mr. John Hare Powel,	10
The premium for the best broad tail Ewe of Tunisian blood not more than two years old to Mr. John Hare Powel,	10
The premium for the best broad tail Ram of Tunisian blood not less than two years old to Mr. John Hare Powel,	10
The premium for the best broad tail Ewe of Tunisian blood not less than two years old to Mr. John Hare Powel,	10

All the premiums awarded to Mr. Powel were relinquished for the benefit of the Society.

The premium for the best Boar not more than four nor less than one year old to Mr. G. W. Sargeant, fer his Leicester Boar one year old, bred by Mr. Parsons of Brighton,	10

Relinquished by Mr. Sargeant for the benefit of the Society.

For the next best to Mr. Benjamin Hickman,	5
The premium for the best Sow not more than four nor less than one year old to Mr. Francis Hickman,	$10
The premium for the best Pigs not less than five in number, not more than nine, nor less than three months old, to Mr. Adley Brown for a litter of six Pigs,	10

SAMUEL WEST,
JOB ROBERTS,
WILLIAM EVANS,
REUBEN HAINES,
Committee on Sheep and Swine.

HORSES.

To the Board of Directors the Committee on Horses, respectfully report—

That among the seven blooded horses exhibited before them, they are of opinion, that the Arabian horse Grand Bashaw, owned by Mr. Joseph C. Morgan, is entitled to the premium of 50 dollars for the best thorough-bred stallion; but in preferring this horse, the committee take great pleasure in saying, that there were some others which possess a considerable share of merit.

That Planter Lyon, owned by Robert Long, is "the best stallion fit for draught," and is entitled to the premium of 50 dollars; but there were other horses shown, which are deserving of notice, particularly Stephen Webb's Chester county Lyon, Imlay J. Bennett's First Consul, and Joseph Kersey's Chester county bay.

That "for the best thorough-bred brood mare," the committee would recommend, a reservation of the premium: nevertheless, several mares of considerable merit were exhibited, particularly Kate, a white mare, with a very fine Bashaw colt, owned by Mr. John Elliott, and Gipsey owned by Mr. Reuben Haines; also Kate, a bay mare, owned by Mr. John Hill.

That "for the best mare fit for draught," the committee regret to say, that only two were exhibited, and that in their opinion neither of them is entitled to distinction by premium.

JAMES WORTH,
JOHN ELLIOTT,
JOHN G. WATMOUGH,
GEORGE BLIGHT,
AARON CLEMENT,
E. MORRIS,
Committee on Horses.

The premium for the best draught horses, "reference being had to their performances in the plough," was awarded to Col. Watmough.

The premium for the best yoke of oxen, "reference being had to their performance in the plough," was awarded to Mr. George Sheaff.

JONATHAN ROBERTS, *President.*
JOHN HARE POWEL, *Cor. Sec.*

Paoli, Chester County, October 25, 1823.

The committee on household manufactures, having examined the various articles exhibited for premium report:

LINENS.—For the best Linen Cloth, one yard wide and 29 yards long, to Charles Fish, of Philadelphia,	$15
CARPETING.—For the best Carpeting, two pieces, 50 yards, to Joshua Evans, of Chester county,	10
Second best, 27½ yards, to Hannah Cope, of Chester county,	5
Best Hearth Rug, to Mrs. Parker, of Chester county,	

KNIT HOSE.—Best Woollen Knit Hose, two pair, to Elizabeth Kersey, of Chester county,	3
BLANKETS.—Best specimen of Blanketing, to Joshua Evans, of Chester county,	10
WOMEN'S HATS.—For the best Woman's Hat, made of straw, to the pupils of the Pennsylvania Institution for the Deaf and Dumb,	10
For the second best Woman's Hat, made of *spear grass*, in imitation of Leghorn, to the pupils of the Fellenbourgh School of Philadelphia,	5
BUTTER.—For the best preserved Butter, 180 pounds, three months old, to Mrs. Dr. Harris, of Chester county,	20

In addition to the articles for which premiums are designated, many other articles of manufacture were exhibited, some of which the committee deem worthy of notice.

A very fine child's gymp hat, and various articles of cotton and linen fabrics, by the pupils of the Pennsylvania Institution of the Deaf and Dumb.

A remarkably fine gentleman's Beaver Hat, manufactured by Mr. Shelmerdine.

A specimen of book-binding, executed by David Clark, of Philadelphia, highly creditable to his taste and workmanship.

The committee are compelled to express their regret, that the exhibition of household manufactures was not so extensive and multifarious as was to be expected from the great improvements exhibited in all the other branches connected with agriculture and rural economy. The late period at which the society was incorporated, and thereby enabled to give publicity to its list of premiums, may in some degree account for the scantiness of the exhibition of household-manufactures, but it is confidently anticipated that at the next annual exhibition the display will afford abundant evidence of the household manufacturing skill and industry of our farmers.

The various articles manufactured by the pupils of the Pennsylvania Institution for the Deaf and Dumb, contributed much to the interest of the exhibition of household manufactures. This institution, reared by individual philanthropy and the bounty of the legislature, contains within its walls pupils from most of the counties in the state, and cannot therefore fail to excite a general feeling in behalf of its prosperity and welfare. The great and prominent design of the institution is to render the unfortunate mutes, intelligent beings, capable of exercising the faculties of the mind, and of receiving moral and religious instruction. In addition, however, to the successful accomplishment of this most important object, under the enlightened and watchful guardianship of the directors and teachers—the pupils are instructed in the various mechanical arts, and employed in occupations adapted to their peculiar situation, which will be to them, when separated from their associates, sources of innocent amusement and profitable labor.

Thus, by the happy union of individual benevolence and legislative munificence, the most unfortunate of the human family are rescued from the helplessness of their miserable condition, and elevated to the rank of intelligent creatures, and rendered useful members of society, contributing their share to its productive labour.

The committee notices, with equal pleasure, the bonnet manufactured from *spear grass*, in imitation of Leghorn, by the pupils of the Fellenbourgh school, in Philadelphia. The school is exclusively supported by the charitable contributions of some of the citizens of Philadelphia; and was instituted for the purpose of instructing poor female children in the elements of education, and in the knowledge of manufacturing bonnets and hats from grass, straw and other vegetable materials.

The article exhibited as the workmanship of the pupils, and which took the second premium, was executed with great neatness, and evinced rapid improvement in this useful and important branch of manufacture, demonstrating the capability of our country, by proper encouragement, to render us independent of all foreign supply of an article in general use, and which constitutes an expensive item of consumption.

STEPHEN DUNCAN,
WILLIAM DARLINGTON,
JOHN ELLIOTT,
Committee.

Paoli, Chester County, Oct. 24, 1823.

CULLEY, ON LIVE STOCK.

Of the time the different Domestic Animals shed their teeth, and the rules for knowing their age.—By George Culley.

Neat cattle cast no teeth until turned two years old, when they get two new teeth; at three they get two more, and in every succeeding year get two, until five years old, when they are called full-mouthed, though they are not properly full-mouthed until six years old, because the two corner-teeth, which are the last in renewing, are not perfectly up until they are six.—It may also be worthy of notice, that the first wrinkle upon the horn does not take place until three years old, after which they get another circle or wrinkle every year as long as the horn stands on, though not always equally discernable in all horned cattle; and I am sorry to say, that it is too common for jobbers and cow-dealers to scrape, rasp, or file down these wrinkles in old cattle, to prevent the age being known, and by that means to deceive and impose upon the unwary, ignorant, and unsuspecting.

A horse does not cast or renew any of his teeth until between two and a half and three years old, when he casts two above and two below.* Between three and a half and four years, he casts four more, *viz.* two above and two below; and between four and a half and five years old, he casts the remaining four, which are called the corner teeth. It is remarkable that the eight first teeth which the horse renews, make all their growth in about 15 days, while the four last or corner teeth, take about a year and a half to make their full growth. The four first teeth he renews, are called *nippers* or *gatherers*, the next four are called *separaters*, and the four last, are the corner teeth, which also contain the black mark by which the dealers can so well distinguish the age of a horse. And some may think that I ought to say something of this matter here; but those that want to be acquainted with this doctrine, need only consult Bartlet, Brecken, or any of our books upon farriery, where they will find it fully explained. Horses have also four tusks, or tushes, (as the dealers call them) which stand between the fore-teeth and grinders, and usually make their appearance when a horse is about three and a half years old, but are not at their full growth until the horse be six years old.†

Sheep in general renew their first two teeth from 14 to 16 months old, and afterwards every year about the same time, until they are turned three years old, or rather three shear, to speak technically, when they become full mouthed; for, though they have eight teeth in the under jaw before, I believe they only cast or renew the six inside ones. However, this matter is not perfectly clear, because I find the shepherds differ in opinion, some thinking they cast only six, others again all the eight fore-teeth.

Observations on the above.

It may be observed, that sheep renew their first teeth soon after they are past one year old, Neat Cattle not until they are past two, and horses not until they are near three years old. And this is perfectly consistent with the wisdom of the Great Creator in all his works:—because, the horse-tribe live the longest, and are evidently meant to bear the greatest hardships. The bull-tribe the next longest; and though very useful as a beast of draught, yet not at all equal to the horse in firmness and hardiness: And the innocent sheep live the shortest time, and increase the fastest, not being intended as a beast of burden our draught, but to feed and clothe the lords of the creation.—I have heard of particular sheep living to near 20 years old,—those which the mountain-shepherds call guide sheep, *viz.* old wethers kept on purpose to guide and direct the bleeting flocks upon those unfrequented wilds. I have also heard of particular bulls living more than 20 years: and I knew a horse live until 47 years. This horse had a ball lodged in his neck at the battle of Proud Preston in the Rebellion of the year 1715, and the ball was extracted when the horse died in 1758. This horse was supposed to be four years old in the year 1715, consequently would be 47 in the year 1758.

Now respecting the judging of the age of the above animals by the renewing of their teeth,—though perhaps the best rule we know of, yet I cannot think it is always to be depended on.—However, in sheep, I am certain we are liable to be misled by it; and I apprehend much depends upon being early or late lambed, well or ill fed, and so on. Particularly tups, I have frequently known to have what we call four broad or renewed teeth, when by the above rule they ought to have had only two. A friend of mine, and an eminent breeder, Mr. Charge, of Cleasby, a few years ago, shewed a shearing tup at Richmond in Yorkshire, for the premium given by the Agriculture Society there, which had six broad teeth; in consequence of which, the judges rejected Mr. Charge's tup (though confessedly the best sheep,) because they believed him to be more than a shearing. However, Mr. Charge afterwards proved, to the satisfaction of the Gentlemen, that his tup was no more than a shearing.

NATIVE FERTILITY OF WESTERN LANDS.

Extract of a letter to the Editor.

The *mammoth* turnips, and other extraordinary vegetable productions, of which we occasionally see accounts in the papers, are commonly vagaries of nature monsters that are rarely seen, and no indications of goodness of soil or skill in cultivation. Now I cannot offer you specimens equal to some exhibited by farmers far *to the north of us*, yet I can inform you of a *crop* of three acres of common field turnips, produced near the Forked Deer River in the Chickesaw purchase of Tennessee, that I suspect has never been exceeded for size of the article. They were cultivated, (if a bare committal of the seed to virgin earth can be called cultivation) by a Mr. Butler, and weighed from eight to twelve pounds on the average. A cart load of these turnips passing through the town of Jackson, from one of Butler's quarters to another, several of the inhabitants had the curiosity to weigh *three*, and their weight was about *fifteen* pounds each. These particulars I have from Herndon Harrelson, and Robert Hughes, Esqrs. who were present at the weighing; and I have no doubt of their correctness. No agricultural society could be expected to reward the skill of the cultivation, for it consisted only in belting the trees, and harrowing the seed into the earth, without previous manuring, or after tillage. *Again*—Seeing at the table of a Mr. Morris, on the Obion waters, in the same purchase, some fine biscuit, it produced from him the information that his wheat crop was undesigned, and purely accidental; that he scattered some wheat thinly among his turnips, to save them from the fly, and from three acres he obtained thirty bushels of wheat. Rice there grows luxuriantly on the tops of high and dry ridges. *Once more*—I have seen Indian corn or maize, in the same country, planted on land, when the only preparation was belting the trees, and ploughing a single furrow with ill broke oxen, serving merely as a guide to plant the rows in; and the only tillage, once chopping round the corn with hoes, produced forty bushels to the acre. These are not monstrous mammoth productions, nor the effects of prepared land and tillage, but the fair specimen of what has been usually produced by the native strength of the soil in an extensive, healthful, and beautiful country, for the four years it has been the abode of civilized men: though well cleared and well cultivated land will produce twice the quantity of corn mentioned. These lands sell at from three to five dollars an acre, or for less than one fourth of the value of one year's productions, while in England, land sells at from fifteen to twenty year's purchase. We cannot, with a knowledge of all these facts, wonder at the powerful tide of emigration, that is setting to the west, which even the rapid improvements making in soil and tillage to the east, is not powerful enough to divert or restrain.

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* *Neat cattle and sheep have no teeth in the upper jaw before, but only in the under jaw, while the horse tribe has both above and below: indeed the former chew the cud, but the latter does not.*

† *The above is taken from the Complete Horseman or perfect Farrier.*

CALVIN JONES.

Wake Forest, Dec. 4.

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TO THE EDITOR OF THE AMERICAN FARMER.

CULTIVATION OF THE FIORIN GRASS.

DEAR SIR,

I feel bound to atone for the little value which I attached to fiorin, (*agrostis stólon·fera*) in my late communication on grasses, by sending to you some facts, which have subsequently come to my knowledge, and which have materially altered my opinion of its value.

Fiorin is indigenous in the north part of England, and in Ireland and Scotland. In its *natural* state, while growing promiscuously with other grasses, it excited but little notice, and was esteemed but of little value. The Rev. Dr. Richardson, of Ireland, first successfully undertook to *cultivate* it. His high commendation of its good qualities, led others to adopt his practice; and although many experiments proved unsatisfactory, from the want of judicious selections of soil, or proper care in preparing it, or nursing the young plants, its reputation has been increasing, particularly in Scotland, where it threatens to supersede most of the other grasses as a winter food for cattle. Nor can this predilection for fiorin excite surprise, if we give credit to the accounts which have been published, (and I see no reason why we should not) of the advantages which have attended its cultivation, of its nutritious qualities, and of its astonishing product. But its peculiar fitness for peaty and mossy swamps, which abound in Scotland, enhance its value in that country.

Sir James Stewart speaks highly of fiorin. He cultivates it on what he terms a spongy moss, and obtains from five to six tons on an English acre. It is cut the last of September or beginning of October, put into small stacks, and left in the meadows till wanted. He feeds 11 lbs. to his saddle, and 16 lbs. to his carriage horses per day, with the usual allowance of oats—milch cows, 16 lbs. with no other food except straw—the former to his fatting oxen—22½ ounces to the pound. His cows, when fed with fiorin, gave 40 per cent. more butter than when fed with potatoes and straw.

James Baird, manager at Shotts iron works, Scotland, has cultivated fiorin with still better success His product has been from five to seven tons per acre. He cultivates four acres, and is preparing to lay down 20 acres more, on a moss, which had hitherto not been worth sixpense an acre. The laying down of fiorin cost him from 12 to £14 an acre, (53 to 62 dollars) which he realised from the first year's crop,

Dr. Richardson has cut, on different pieces, his eleventh, twelfth and thirteenth crop, without any falling off in quantity.

Cultivation—The ground requires to be well drained, ploughed or spaded to a good depth, thrown into ridges, and ameliorated by potatoes or other crops; then pulverised, levelled, and cleaned by the harrow and rake. The stolones, or strings are then laid upon the surface, so as nearly to cover it, and a compost of earth and lime, or earth and ashes, is spread over, sufficient to fix them, and prevent their being blown away. After this it is necessary carefully to exterminate every other grass, and all weeds, so long as they continue to appear, which seldom requires much labor after the first season. A top dressing, like that abovementioned, must be applied once in two or three years, to prevent deterioration. Sir James Stewart's compost consisted of one half of earth and one half ashes, fifteen cubic yards of each, to which he added six bushels shell lime, and applied this on an acre. The best soil, he says, for fiorin, is a well decomposed loamy peat soil. Though the fiorin is generally propagated by stolens, it produces seeds, and is produced spontaneously by means of draining and top-dressing only.

Albany, Dec. 11, 1823. J. B.

N. B. The high value of this crop in Scotland, is evidenced by the fact, that the Highland Agricultural Society, in 1821, awarded two premiums of 20 and 10 guineas, for the greatest products of fiorin produced on an acre in certain counties.

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FROM POULSON'S AMERICAN DAILY ADVERTISER.

ON THE USE OF CHARCOAL AS A CATHARTIC.

[*In cases of obstinate costiveness.*]

Dr. DANIELL has lately published some cases illustrative of the effects of CHARCOAL in cases of obstinate constipation. In the first case which occurred to him, after having employed the usual treatment of bleeding, warm bath, and mercurial purges, aided by jalap, caster oil, with other active medicines of this kind, without success, he conceived that a favourable opportunity had occurred for trying the efficacy of Charcoal.

'I give,' he has informed us, 'a table spoonful of it every half hour, and at the expiration of about seventeen hours, my patient's bowels were freely evacuated. The discharges, which consisted chiefly of a thick mucus, were coloured by the Charcoal. This medicine was then discontinued, and caster oil substituted; the latter however evacuating but partially, I had recourse again to the Charcoal, which was continued until the patient recovered. My observations since have convinced me of the necessity of continuing the Charcoal until the discharges are no longer marked by the presence of slime or mucus, which I have found to abound in very considerable quantities, in all the cases of constipation which have fallen under my care. And I think the existence of this matter in the intestines, may explain the cause of failure, not only of powerful enemata, but of cathartics, to evacuate them. Lining, as it most probably does, the chief or whole extent of the bowels, it protects their surfaces from the influence of the medicines.

'The Charcoal probably exercises a chemical influence upon this matter. The evacuations produced by the Charcoal appear to be composed chiefly of this article, and the mucus or slime intimately blended.

'Since this case, I have used the Charcoal in fourteen or fifteen other instances, and always with complete success. In this disease, the sufferings of the patient are usually extremely great, and I have occasionally, since adopting the Charcoal, attempted to relieve them by other cathartics which operate more speedily, but I have invariably failed, and was afterwards compelled to have recourse to that remedy; sometimes however, not until the third and fourth days of the disease, and always with decided advantage. Further experience has convinced me, that the most speedy, as well as most certain relief, is to be obtained from the free use of Charcoal. If it does not wholly relieve, it always very much mitigates the pain in six or eight hours from the period of its first administration; and within my observation the patient has always been entirely composed before the operation of the medicine upon the bowels.

'To many, the tardy operation of this medicine may appear as a serious objection to its use. It was formerly so to me, but since I have been convinced of its certain efficacy, and that although it may not act upon the bowels in twenty-four hours, even after its first exhibition, yet that it will, in one third of the time, very much relieve, if not wholly remove, the pains, &c. This objection appears comparatively unimportant; for what avail a few hours in the cure of a disease, if we can control the sufferings of our patient, and afterwards certainly relieve him?

'In regard to the dose of this medicine, the rule which I have pursued is to give it as freely and as frequently as the stomach will allow. The quantity required is considerable. It has a happy influence in lulling the iritability of the stomach, when nothing else which I have used, would control the nausea and vomiting of the patient; thus fulfilling the double intention of alleviating a very distressing symptom, and then removing the disease itself. I usually give from one to three table spoonsful of the Charcoal every half hour or hour: whenever the stomach becomes overcharged with the medicine, the excess is thrown off, and the stomach is again quiet. I give in lime-water, milk or water alone, the vehicle having appeared to me unimportant.'

London Medical Repository, No. 116.

Remarks on the above, by S. V. S. a Correspondent of the American Farmer.

It is very certain the complaint alluded to in that paper, viz: Obstinate Costiveness, attended with great pain and a constant rejection of cathartic medicines, is one of the most distressing to the patient, and perplexing to the Physician that can occur in practice—an improvement in the treatment is worthy the attention of every member of the faculty—Cholic— Cramp Cholic—Illiac Passion, and the disease in question, are nearly one as regards the cure, and it is often dubious whether the stricture has produced the stoppage in the bowels, or whether the constipation has produced the irritation to the disease? Be that as it may, we must look to the action of some medicine that will clear out the bowels. Without this there will be no cure that can be trusted to, and with it little else will be required, but a repetition of suitable purgatives, in small doses, till the bowels recover their wanted action. A true idea of the disease, and a correct theory of the *modus operandi* of the medicines used are necessary to farther improvements in the case, and however happy Dr. Daniell may have been in his practice, his theory is quite inadmissable. The mucilage discharged into the bowels, which he believes to be of importance in the cause is surely the mere effects of a great push on the bowels, and is a salutary operation of nature, by which a nigher grade of inflammation is prevented, it has nothing inimical in it, and requires no attention from the Physician, though its cessation will indicate an increase or a cure of the disease. In the former, a speedy mortification will ensue; in the latter, a sensible relief. To have a plain idea of the action of Charcoal, we must reflect on the quantity the Doctor has given, if his spoons were level full, he has given at least three pints, and if heaping full, at least five pints, besides the vehicle it is given in. This enormous mass of inert matter will distend the whole canal, and must act mechanically, and will be as a great piston in the bowels, making these its own syringe, and thus forcing the obstruction. It will also give a considerable friction by means of the peristaltic motion. Those therefore that use the Charcoal must not stop till they have given largely, or they will be disappointed; other articles have been formerly used, that acted mechanically, though not by a general distention, but rather as a perforator or lever, and it is a pity that quicksilver was ever laid aside—too much of a chemical rage was the cause of this. One of the most extensive and eminent practitioners in Maryland, informed the writer of this article that it never disappointed him; he often resorted to it in extreme cases. It is highly probable that many other articles, ponderous or light, might be used with advantage. Steel filings have been introduced very largely with impunity where worms were suspected—Say half to an ounce at a dose, and the Charcoal might be an admirable remedy for the tape,or other worms, actually pushing them out. There is however an article used by Dr. Daniell, that I would recommend more than the Charcoal; it is that grand article so useful in *morals* and *physic*, viz: *Patience*. The Doctor protracted this to seventeen hours, but with half of this extension of time and common remedies, nineteen in twenty cases admit of cure by very common remedies. The great error consists in giving full doses of medicine instead of very small. In several cases where the writer of this attended and all the medicines that promised success had been rejected, although rendered palatable and sedative by opiates, cinnamon, æther, &c. the following plan was successful: one to two grains of calomel, with one of aloes, was given every *half* hour; it was made into a pill as small as possible, with a little stiff basilicon, and no drinks allowed; ease was procured before the purgative operation—and in no case was more than twenty-five grains of calomel used before a free operation ensued. The bitter of the aloes is considered essential to strengthen and settle the stomach, and the basilicon hinders the pill from acting too quickly on the stomach, It would be unpardonable to let the patient suffer till the pills operated. Bleeding to asphyia is instantly to be performed, and a general warm bath administered. Blistering over the pained part after bleeding is not to be neglected, and a free use of enemas at all times. In several flatulent cholics there can be little doubt but that air might be extracted from the bowels with great advantage, by means of a syringe, with a long elastic pipe, with side openings, introduced with care, and the piston very gradually drawn, making at the same moment a turn in the syringe so as to prevent any of the guts being drawn into the apertures by suction. After bathing for half an hour, it is no uncommon thing for the medicine to act freely—it greatly facilitates the operation, as well as relieves the pain. A very large sponge is eminently useful where a large bathing vessel is not at hand. Such have been the means by which several cases of the most agonizing kind were relieved in November last, and what is a little remarkable, that they were within a hundred yards of each other in the country, and in different families—it was indeed somewhat epidemic. The same disposition in the climate at another season would have probably produced the dysentary.

TO THE EDITOR OF THE AMERICAN FARMER.

NATURAL HISTORY.

Emasculation of Squirrels.

Baltimore, Hanover-st. Dec. 16th, 1823.

Dear Sir,

I regret very much that my time has not permitted me to give an earlier attention to the communication with which you have honored me, enclosing the remarks of your South Carolina and Kentucky correspondents, on the subject of the apparent emasculation of a great portion of the common male grey squirrel, (sciurus cinn. Linn.) a native of our forest. The Zoology of the United States, has been better described, being much less extensive than the other departments of our Natural History—but it would appear that the manners of this elegant and extensive species of sciurus, are not yet sufficiently well known to us. Every enquiry which tends to shed light upon the manners and habits of animals should be encouraged as a matter of general interest to man; and I hope the day is not far distant, when the vast and intelligent body of our agriculturists will give more of their time to the cultivation of natural history, and in particular, to the interesting and useful branch of comparative anatomy. It has been well observed by your Charleston correspondent, that it is contrary to the provision of nature, that the parent should mutilate its young, a fact which led him to doubt that the young squirrel was emasculated by the old one; and his acute observation has enabled him to arrive very nearly at a truth, which he could have established, had he been a comparative anatomist.

In the mammiferous animals the testicles vary principally in their situation, according as a scrotum is developed, or not, for their reception. In the families of this extensive order of animals they are lodged naturally, after their formation, which in the fœtal state is within the cavity of the abdomen, in three different situations.

1st. In the Quadrumanes, they are constantly suspended in a single bag, or purse—in the greater part of the carnivorous animals, as the Cats, the Bears, the Ichneumon, &c. they are situated in this purse, behind the pelvis, and below the anus;—in the pedimanes, and some of the diadelphes, as the kangaroos, this bag is very long, and suspended in front of the pelvis, in which both testicles are connected together without any intermediate cellular substance. In most of the ruminating animals, and in the horse, this purse is divided into two distinct sacks.

2. In the Elephant, the Echidna, the Ornithorynchus, the Whales, and the amphibious animals generally, the testicles remain constantly in the abdomen, situated by the side of the kidnies, where they are enveloped, and retained in their proper position by a strong process of the peritoneum.

3d. In the Camel, the Otter, and some of the family of the Pachydermes; amongst some of the Carnivorous animals; in a great number of the family of Rodentia, or the gnawing animals, such as the Rats, the Agoutis, the Beavers, the Squirrels, &c. the testicles are bound down, either beneath the skin of the perineum, or groin; and they slide from the lower part of the belly into one or other of these places, particularly during the period of their loves.*

In the squirrels where these organs pass alternately from the abdomen under the skin of the belly, and vice versa, the communication is so large that the tunica vaginalis forms of the skin, as it were, but a *cul de sac*, which appears prolonged under the pelvis. Through the agency of the cremastu muscle, the testicles glide with great ease from the end of the sac into the abdomen, which sufficiently accounts for their absence, from beneath the skin of the belly, and the apparent emasculation. This sac is much more extended in the second or third, than in the first year of life, so that in the young male squirrel of six or eight months, the testicles can just be felt verging from beneath the skin of the belly—in after life, when in the sac, they are much more apparent. Here let me observe that in those inferior animals, in which the testicles remain constantly in the scrotum, the cavity of this bag communicates always by a straight canal with that of the abdomen; so much does the almost invariably horizontal position of most of the mammiferous animals diminish the danger of herniæ. Not so in man; his position being erect, nature has used her utmost ingenuity to close this canal to prevent a misfortune under all circumstances of too frequent occurrence. During the season of copulation the combats which take place between the males in many classes of animals frequently end in their destruction, or mutilation. In the combat described by your Kentucky correspondent, the delicate spot where the wounds were inflicted on one of the knights, should be looked on as purely accidental. Nature appears to have been particular in her formation of these animals for propagation. They are in heat early in the spring, when it is often very diverting to observe the female, feigning an escape from the pursuit of two or three males, and to observe the proofs which they give of their agility, which is then exerted in full force.† The late professor Barton informed me that he had observed them, in the act of copulation, to fall from the summits of the highest trees, which ended in the destruction of one or both of the parties *dans le moment d'amour*. The gestation of the squirrel is not longer than six weeks, the female bringing forth from three to five young at a time, usually about the middle of May.

You ask, is it a fact that the male rabbit will destroy its defenceless young? Such a fact is not generally conceded by naturalists—but in my own opinion it rests on too many unequivocal proofs to be doubted. It is by all admitted that the female at the parturient period, always separates and secretes herself from the male, and after bringing forth, continues thus secretly to nourish her offspring until they arrive at an age which places them beyond danger. M. Buffon observes, that on those occasions, the female digs herself a hole different from the ordinary one, by being more intricate; at the bottom of which she makes a more ample apartment.* This done, she pulls off from her belly a good quantity of hair, with which she makes a bed for her young. During the two first days she never leaves them; and does not stir out but to procure nourishment, which she takes with the utmost dispatch; in this manner suckling her young, for near six weeks, until they are strong, and able to go abroad themselves. During all this time the male never visits their separate apartment; but when they are grown up so as to come to the mouth of the hole, he then seems to acknowledge them as his offspring, takes them between his paws, smooths their skin, and licks their eyes. All of them, one after the other have an equal share in his caresses. Several gentlemen of Virginia and Maryland who possess extensive warrens, have informed me that they have always found it necessary to chain the males during the period of lactation, to prevent the young ones from being killed. It seems equally true, that on some occasions the male cat seeks and destroys the young of the female. Reflecting on this interesting fact in natural history, we are led to this conclusion, that these animals, unlike the crocodile of the Nile, who satisfies his voracious appetite by the destruction of thousands of his own offspring, are propelled to seek and destroy their young from the sole motive of enticing the female to receive the embraces of the male at an earlier period than she would do, if she continued to give them nourishment and protection.

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* *Vide Cuvier Leçons anat. comp. art. generation.*

† *Shaw's British Zoology.*

I shall always be happy to contribute any information for the pages of your interesting and highly valuable paper, and I beg you to be assured of my high esteem and regard.

P. MACAULAY.

John S. Skinner, Esq.

Charleston, October 27th, 1823.

Mr. J. S. Skinner,

Sir—Three or four weeks ago, some of your correspondents made a few observations on the apparent emasculation of squirrels. As they did not doubt the fact, and no one, as far as I have seen, has solved the mystery, give me leave to attempt it.

That many squirrels have that appearance, cannot be disputed—the opinion is, therefore, prevalent, that they have been mutilated by their parents, when young. This opinion I always doubted, because, contrary to the provisions of nature; and while a youth, I observed, that those which were defective, were uniformly smaller than the male squirrels which were perfect. According to usage, with most other animals, they would have been larger if mutilated—but this inference was not conclusive.

I next observed that this difference was discoverable only in the autumn and first of the winter, and cannot recollect that ever I saw one with this peculiarity after Christmas—certainly not in the spring. I, therefore, concluded that it was only the young male squirrel, which had this appearance, and that the parts in them were not matured. I was confirmed in this opinion by learning that in the human species, the male fœtus in utero has not the testes apparent any more than the young squirrel; but that they are matured within the body of the child, as is proved by dissection, and descend into their proper place, a little before birth—frequently during the labour of birth, and occasionally after the birth; in this case having sometimes been mistaken for a rupture.

I have, therefore, no doubt, that the organs of the male squirrel are not matured until four or five months after birth; and that they then descend from the body to their proper place. I have sometimes thought it might be better for the human race, if their males were a little more like the squirrels, and did not become matured for a length of time after birth, in proportion to their greater length of life. Might not several valuable consequences be the result, if our young men were not matured until they were about twenty years of age? But this is all speculation.

In confirmation of my opinion, respecting the young squirrels, I was lately told by a gentleman on whom the utmost reliance may be placed, that a young male squirrel was brought into his family as a pet—he was apparently a neuter, and was believed to have been "turned" like an Italian; but in a few months, he became as well formed as the most perfect of his species.

As this is the season of the year when young squirrels may be easily procured, I hope some of your friends will take the trouble to investigate the matter, both on the dead and living squirrel, and either confirm or disprove my suggestions.

SENEX.

Extract to the Editor, York, Pa.

A friend, to whom I read the communication between Governor Clinton and yourself, on the emasculation of the squirrel, told me that he has frequently heard old hunters say, that, in the battles between the males, they always attack that member, and, that the vanquished rarely escape without being thus mutilated. This may be only a reiteration of the fact, without any developement of the cause, but the opportunities for observation of this class of men gives them claims to belief, so far as their information goes.

* * *

Extract to the Editor, from Mark Hardin, dated Shelbyville, Kentucky, 22d Oct 1823.

Sir—I have noticed in one of your last numbers which has been received, a notice of the castration of a large portion of the male grey squirrel. I will remark to you on that subject, that an accidental occurrence took place when I was a boy, some thirty years since, on the road to school; myself and a younger brother saw many squirrels on a tree—the sows were then in heat, and the master male pursued the one nearest to him to some little distance on the tree from the female; in that period, another closely pursued her, the master returned, pursued up the tree, and immediately took hold of him—the nearest part, I presume, being the testicle—in the scuffle both fell entirely to the ground near us, and one of them we killed before it could get out of our reach; the bag containing the testicles was considerably torn, and the chord by which the testicles are suspended, was bitten through, which, I presume, would have caused them to rot off. In relation to the fact of none other of the animal kingdoms pursuing the same course, I should suppose, might and must be accounted for by their not being prepared with teeth, which at one exertion, could destroy the chord of the testicle. The rabbit and the rat with their species, are the only animals I have seen whose teeth could prove destructive.

Whilst on this subject, and as you appear to be a gunner, I will name to you, how you may kill all the males in the running season, which are after the female; that is, I can advise you how to discern the males from the female one, (for if she is killed, they all scatter) which will give you an opportunity of killing many of them, the female in attempting to hide from her pursuers, leave many of the males some distance behind; they in attempting to find her run on the limbs and trees with their noses close to the limb or tree; this the female never does when in heat, and pursued.

Respectfully your's,

MARK HARDIN.

P. S. I have particularly noticed the curculis so destructive to our stone fruit; and had made some memorandums as to the enemies to the young peartree, which I intended for my late brother's benefit. On these two subjects, I shall make some communications at or before the season when they should be attended to.

[Many farmers emasculate their lambs by a ligature made on the spermatic chord, which soon occasions the testicles to *rot off.—Edit.*

CULTIVATION OF STRAWBERRIES—SILK WORMS—FORM OF A GARDEN PLOUGH—CUTTINGS OF CHEROKEE ROSES WANTED.

TO THE EDITOR OF THE AMERICAN FARMER.

Annapolis, 20th Dec. 1823.

Dear Sir,

As much is said, and many enquiries are made, about the best mode of cultivating the strawberry, I send you the enclosed account of the mode pursued by the late Col. Hawkins, at the Creek agency upon the Flint River, which you will see was attended with the greatest success. My practice is nearly similar, and I have never failed in having a great abundance of that delicious fruit. It is at your service to make what use of you think proper.

C.

P. S. In one of your papers is an interesting piece, by a gentleman in or near Philadelphia, upon raising silk worms, and their great yield.—Where can the eggs be procured? I will thank you for the information through your very valuable paper—also where a few cuttings or plants of the Cherokee rose can be procured.

Whilst I have my pen in hand I will mention, that I have never seen any mention made in your paper, nor in use any where in this state, of that very useful and efficient instrument, the garden plough. With this light implement a boy of twelve or thirteen years of age can do more work in an hour than a grown man with a hoe in half a day, and stir the ground better and deeper. It is intended to stir between plants, either in rows or squares, which it does most effectually. A small shovel is fixed in a beam by its shank, and the beam has a small wheel in front and a pair of handles in the hinder part by which to guide it. Some of your numerous correspondents could give you a drawing, and description, particularly from the south, where I saw it in use.

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* The Editor well recollects that when a boy, in the act of hunting, he found the bed of a common hare with four or five young ones, but though nothing could be better prepared for the warm and comfortable accommodation of infant existence, there was no intricacy in the construction of the apartment. It was a simple excavation, to the depth of, perhaps, eight inches on the southern aspect of a hill; first bedded with dry leaves, and then completely interlined with the fur of the dam.

[The Editor trusts to the prompt and kind attention of his correspondents for the information here sought.]

STRAWBERRIES.

The mode of cultivating the strawberry at the Creek Agency on stiff loam land, or what would be better understood in the southern states by oak and hickory land. Two squares of forty-five feet were covered with old manure spaded up, all the roots taken up, raked even, laid off and planted 13 inches, plant from plant, in rows each way. The planting done in August, September and October as moist weather offered, watered after planting, and repeated for a night or two till the plants took root. The plants were from runners of the year. The roots docked to one and a half inch. The whole kept free from weeds by hoeing both ways, just under the surface of the earth. In November the squares were strewed over thinly with old manure. The last of January or early in February the squares were worked over, then strewed over thinly as before with well rotted manure. Afterwards kept clean from weeds by hoeing with small thin bladed sharp hoes just under the surface and the runners taken off. Land moderately rich, requires no manure.

One square was planted with native strawberries from our woods, the other an oval cone-topped strawberry, sent to me by a Scotch gentleman as from Scotland. The native strawberry in the woods seldom produces more than ten on a single plant, from whence our plants were taken. A native bunch the last year under our culture produced, one hundred and eighty-three, one of which weighed seventy-seven grains, and they began to ripen the 12th April. Those from Europe fifteen days later. Some borders of the garden were edged with them one foot, plant from plant, and had a handsome appearance.

The Creek Agency is in lat. 32, 39. long. 84, 20. from Greenwich.

To the above account of the method of cultivating strawberries by Colonel Hawkins, the following note has been added by Doctor William Baldwin.

When I arrived at the Agency on the 21st February, I found the square containing the native strawberry [Fragaria Virginica] in full bloom; on the 31st of March two quarts of the ripe fruit was collected; and since that time not less than sixty-nine quarts have been collected from the same square, and they have not yet ceased to bear. From the root which last year produced one hundred and eighty-three berries, three hundred could be distinctly counted on the 27th of April, out of which one hundred were gathered perfectly ripe, weighing each from about two scruples to eighty-one grains. It has been customary to collect from thirty to upwards of seventy on a single root at a single gathering.

There was this year three weeks difference in the time of flowering between the native and foreign species, and about the same difference in the ripening of the fruit. The latter of which are now in the highest state of perfection, furnish berries of a large size, some of them weighing not less than one hundred grains, and they will no doubt continue to bear throughout the present month. Ninety-nine quarts of them have been collected, and one hundred and thirty-two pounds weight from the two squares preserved in loaf sugar.

The square which contains the native kind is only forty-five feet square, and the other forty-five by forty-seven, making in the whole 10 and 6-10ths of an acre. Hence it appears, that a single acre would produce the enormous quantity of eighty bushels, which would serve a large village with this delicious fruit for at least two months. As the preceding account may be considered by some as bordering upon the marvellous, it is with great pleasure that I can add the names of Dr. Samuel Boyakin, of Milledgeville, and Mr. Thomas Ellis, who resides at the Agency, gentlemen of high respectability, who have been witnesses to all the material facts above stated.

The following is the account of the state of the weather for the months named.

January, range of temperature, from 5 3-4 to 70; mean temperature, 44 degrees.
February, from 21 to 80 mean temperature 52
March 30 to 84 61
April 36 to 90 65

* * *

COMMUNICATED FOR PUBLICATION IN THE AMERICAN FARMER.

ESTIMATE OF THE DAILY LABOUR OF NEGROES.—*Charleston.*

Ditching.—In ditching, much depends upon the nature of the ground. In old rice fields, free from roots and stumps, the task for an able bodied negro man is 600 cubic feet; but he cannot do as much in canals.

Ditching is much retarded by gravel and iron mould, as well as by roots and stumps. When these obstacles occur, no regular task can be assigned. If he excavates three or four hundred feet, he will do well. Where large cypress stumps are met with, the best plan is to select such negro men for cutting them out, as are most expert at the axe, and who will work without being closely watched. A very large cypress stump will take one or two day's work. In ditching, it is advisable to work in gangs of six or eight, in a given distance, consisting of men and women. A woman can do nearly as much as a man. While the negro man is handling the spade, or the axe, she can always find employment in hauling back the excavated earth upon the margin, and if necessity requires, she can make use of the spade to great advantage. All ditches ought to be dug with a great slant, making the upper diameter nearly double the width of the bottom.

Making Bank.—In making Bank, it will take one or two less in number than the same length in ditching. Where the soil is stiff clay, and the distance of the margin 20 feet, it will take the full complement, to have the bank well made, and trimmed properly. In making the bank, every chip and root ought to be picked out, and nothing but the solid earth put upon it; the clods chopped fine, will pulverize, consolidate, and cement much quicker, than if thrown on promiscuously. In old rice lands, free from roots and stumps, there is no necessity to make a centre ditch, as the basis for the bank turned up with a hoe, answers every purpose. In rooty land, a centre ditch should always be made.

Turning up land with a hoe.—A negro man, or woman, can, in light rice land of a deep mould, turn up one quarter of an acre, and do it well; but in a stiff, tenacious clay, it will require a third more labour.

Listing Ground.—In listing corn, cotton, or potato land, half an acre is the task for each hand; but in old pasture ground, which is always stiff, and bound with roots of grass, weeds, &c. a quarter of an acre is as much as he can do; and even then, it is hard work. The plough would much more effectually operate on such land; where it is of a light and sandy nature, half an acre can be accomplished in listing.

Bedding up.—The task in ridging or bedding up, is generally a quarter and an half, but as expressed above, in pasture land, where the texture is close, he will do well, if he does one quarter. In old pasture ground, matted with grass root, he cannot accomplish it, to do it properly.

In ridging potato beds, two negroes are always employed in one quarter of an acre.

Trenching Rice.—Each negro man can trench half an acre of rice land, containing 70 and 80 rows in one quarter, and each negro woman covers what the man trenches. In planting rice, the more compact your gang is, the better. A gang consisting of forty workers, may be divided into two parts, allotting to each two sowers, nine trenchers, and nine coverers, in which case each gang would plant five acres.

Hoeing Corn, Cotton, and Potatoes.—In hoeing corn, cotton, and potatoes, the usual task is half an acre; but if neglected in the first hoeing, the negro will find it difficult to overcome the grass in the succeeding ones, particularly cotton and potatoes, which must be kept very clean—having once suffered, the plants never recover, to yield as much as they would, had they been kept clear of grass. On the appearance of the potato above ground, it is advisable to hand-pick the beds of grass, and continue doing so, until the plants are well advanced, and commenced running, when the hoe can with propriety be applied, and continue to be kept as clean as possible, until the beds are covered by the vines. So with cotton, early neglect will cripple the plant, and prevent its producing much.

Hoeing Rice.—In hoeing rice, in its early stage, much depends upon the judicious application of water, to destroy grass; improperly applied, it encourages it, and encreases the labour of the negro; on the contrary, he can always get through half an acre with ease, during the season. In the first hoeing on clay land, less than three negroes to the acre, cannot perform their work as it should be done, and great care taken to remove the clods from the young rice, which would otherwise be much injured. In the third and last hoeing, every spear of grass ought to be pulled up by the roots, to allow the young shoots to come forth freely; at which time, the water ought to be applied, and kept on until the crop is harvested.

The *point flowing*, is so often injudiciously used, that it is a question whether more harm than good, does not result from it; but it is highly advantageous, when due care is observed.

Harvesting of Rice.—About a week or ten days before you begin to harvest rice, draw off the water from your fields. In order to judge when rice is fit to cut, examine the lower part of the ear: if there remain one or two grains of a greenish cast, the rice is then in a fit state to apply the sickle. Negro drivers, in general, allow it to remain until all the grains have turned yellow, in which case the crop ripens too fast, and you cannot keep pace with it in cutting; much is thereby lost by shelling. Avoid, if possible, stacking rice in the field; whole crops are sometimes lost by unforscen accidents: have it brought home, and put in stacks of 8 feet diameter, and about 18 or 20 feet in length, 8 or 10 feet high. Be careful in stacking, to put away by itself all light or damaged rice.

Ricking Rice.—In ricking rice, great care ought to be observed to select all sheaves that are in the least injured by dampness, and put away in small stacks, with any light rice you may have. The propriety of the length of a rick depends upon the number of negroes you work; so that in threshing, the rick may not be too long exposed to the weather. In a gang of 25 or 30 workers, it is advisable to make them about 20 feet long, 12 feet wide, carried up straight to about six feet, then slant off gradually, carrying it up to about 18 or 20 feet high; lay the sheaves all one way, and close. Such a rick, if solid good rice, will produce from 20 to 25 barrels of clean rice, of 600 wt. each barrel. Upon the top of each rick, have a heavy pole or rail, suspended on each side by a grape-vine, under which place a quantity of straw, to protect the rice from the weather. Rice should not be put into large ricks, until it has had about three weeks of the sun, otherwise it may be apt to mow-burn.

Threshing Rice.—Six hundred sheaves of rice, is the general task for a negro man, and five hundred for a negro woman, which can be done with ease; after which, the straw should be well shaken, and examined by the driver, before it is carried to the general heap.

Making Rice Barrels.—Three barrels a day is the task for a cooper, and in making half barrels four a day. The length of stave 3 feet 2 inches; and 2 feet across the head. Such a barrel will hold ten bushels of clean rice.

Hoop Poles.—Where hoop poles are plentiful, a negro can with ease cut one hundred, and bring them home, where the distance is not too great.

Splitting Staves.—In splitting staves, 4 hands are generally sent out, and employed thus: two to cut down and cross-cut the tree to the length of the staves wanted; one to bolt; and the fourth negro is employed in splitting. Five hundred is the task per day. The second day, another negro is sent to draw the staves split the day before; his task is 300. The staves being split, they are then put into piles of 4 and 5 hundred to season.

Splitting Barrel Heading.—The same number of hands are employed in splitting heads for barrels. The task for splitting, per day, is 250 pieces, of two pieces to each barrel head, and 150 in drawing and trimming, for one cooper per day. If more than two to the head, the task is 200.—They ought to be drawn, immediately as they are split, while the wood is green.

Splitting Puncheons.—250 broad puncheons, 4 and 5 feet in length, is the task for a negro to split per day; such as would answer for a barn or negro house.

Splitting Shingles.—In splitting shingles 22 inches long, 4 hands are sent out as above stated; two to cut down the tree, and cross cut to the length; one to bolt, and the fourth to split one thousand. The next day, a negro will draw 500 per day, as his task. In splitting for negro houses, he will split 700 broad, heavy, cypress shingles, 2½ feet in length. In drawing, 400 is the day's work.

Squaring Timber.—A negro carpenter can cut down the tree, and square one hundred feet per day, with ease.

Making Worm Fences.—The rails being brought to the spot, and every thing ready, the bushes and weeds removed, a negro man and woman can put up, stake and rider, 100 pannels.

Post and Rail.—Four negroes can put up 35 or 40 pannels of post and rail fence per day; dig the holes between two and three feet deep, and put down the posts, properly rammed, at the distance of 9 feet from each other. The rails to be 10 feet long, to allow a good lap, or hold, in the mortice.

A negro carpenter can make 60 mortices per day, in the post and rail fence.

Splitting Rails.—One hundred rails of 12 feet long, and heavy, are the day's work of an able-bodied negro man.

Cutting Wood.—A negro man can cut for his task, one cord of oak wood, 4 feet long. The cord, when piled and well filled in, to be 8 feet long, 4 feet high.

Editorial Correspondence.

Charleston, December 4th, 1823.

I have saved a parcel of the magnolia seed; as soon as they are perfectly cured, and fit to pack up, I will send them to you by the Harvest, Capt. Emory. As it may not be uninteresting to you, I will inform you that I am just returned from a visit to Santee, where I saw the Duke and Dutchess of Tuscany, and a numerous family of their offspring. They were much improved, both in size and appearance, and very gentle, so much so, that her ladyship ate from the hands of a negro. They were, I think, the handsomest couple of the quadruped kind, I ever saw; and will, no doubt, prove a valuable acquisition to the breed of cattle in the neighbourhood.

Extract of a letter from a correspondent dated
GREENVILLE, Miss. Nov. 10.

"A lady requests me to forward you a few of the flowering bean, with a request that you will inform her why that vine and bean has been excluded from the esculent, and placed alone in the flower garden—the flower is ornamental, the vine strong, luxuriant and expansive, and the bean prolific. We think that a vegetable thus favored might he useful to other senses than that of sight, if well understood.

Very respectfully,
Your obedient servant,
COWLES MEADE."

Remarks by a gentleman of science and taste to whom the seed were given.

I take it for granted that your correspondent describes the *dolichos purpureus*, which is generally known by the title he gives it—the "flowering bean," though there are many other of the leguminous tribe under the same appellation. The *seed*, however, I think are of D. purpureus. The tribe is an extensive one, and excessively puzzling to the botanist—the greater part are annuals, and many are cultivated for their beans. It would seem that the purpureus has been generally excluded from the esculent garden, not, however, I apprehend from the fact of its not being as nutritious as some of the other varieties, but really because it is considered *superfluous*. Wildenow enumerates fifty-three species of dolichos—the pruriens affords us the celebrated vermifuge, cow-hage or cow-itch, and from the Soja, we get the liquid well known as the soy of our tables.

* * *

FROM THE PROVIDENCE JOURNAL.

JONATHAN'S VISIT TO THE STEAM-BOAT.

Did you ever go down to the steam-boat?
By jings! I'll knock under to that!
I can't hardly tell what to make on't,
It does beat creation all flat!

Why, that great copper kettle; my patience!
I'd tell what it holds if I could,
An' it beats all our Nancy's relations,
To see how they heave in the wood!

Then them wheels all a going and a jangling,
'Tis strange how they ever can sleep—
An' long iron rods, all a sprangling,
Lord sakes! what a threshing they keep.

The great wheels, too, that paw up the water,
An' send up a hogshead, a stroke!
Then that big iron *chimbly's* a snorter!
But cat owl! how it sends out the smoke!

I swagger! 'twould puzzle a fellow
To find out the *head* or the *starn!*
Why *one o' the rooms in the cellar*,
Is as long as the side of our barn!

THE FARMER.

BALTIMORE, FRIDAY, DECEMBER 26, 1823.

☞ In this number, we have published the official details of the Agricultural Exhibition, held at Paoli, in Pennsylvania, on the 24th and 25th days of October last. Among the numerous associations to promote the cause and the practice of Agriculture which have been lately formed, none can more confidently challenge the public admiration and confidence, than the one whose proceedings we have here given—whether we judge by the energy of the few, by whose zeal and masterly judgment, it has been organised and put in motion—the maturity already given, by the best regulations to their whole system of action—the extent of their influence as evidenced by visible effects through a large portion of the state—the number and respectability of their members, and the ampleness of their funds. We have been well assured by several gentlemen, who were present, that the awards of the judges appeared to give entire satisfaction; and when it is recollected that they were among their most respectable citizens, and best established farmers, no doubt of their judgment or fairness could possibly exist; and that the dignified deportment, and manly address of Mr. Roberts, the President of the Society, contributed not a little to give respectability to the scene, in which good order, good humour, and excellent regulations, prevailed throughout.

It was remarkable *that all the bulls which took premiums, appeared, by the cards*, to *have been* bred by Mr. Powel, and *that all the calves which took premiums*, had *been begotten by his bulls.*

* * *

ERRATA, In Mr. Buel's communication on Grasses—No. 37.—Caption, in 6th column figures, for "*acres*," read *drachms*—Holcus lanatus instead of lunatus. Under cocksfoot, 13th line, for *I hould prefer*, read *sheep prefer*, &c. next line *any* for *ever* —4th from bottom column for *facts are*, read *proof is*; again, for, *in favor of*, read *of the value of*. The last are probably errors in the MMS.

Vaccine Matter.

The subscriber respectfully informs the public that, being Agent for supplying Vaccine Matter to the United States' Army, he is compelled to keep constantly on hand a supply of
RECENT GENUINE VACCINE MATTER.

He pledges himself to send to any part of the United States, by Mail, *a supply of fresh Matter, put up in the crust*, with printed directions for its employment. Such arrangements have been made that *none but choice crusts, procured from the most unquestionable Specimens of the disease, will be sent.*

The fee will be $5 for each supply; but should it by any accident fail, on the subscriber being notified of this any time within one month after the first quantity is received, a fresh supply will be sent without any additional charge.

The subscriber will be under the necessity of not taking letters from the Post Office unless the postage be paid.

JOHN REVERE, M. D.
Agent for supplying Vaccine Matter
to the United States' Army.
Baltimore, North Charles-street, Dec. 26.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore

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"Honor and shame from no condition rise,"
" Act well your part, there all the honor lies."

[We have the satisfaction to publish the following account of the most perfect system of breeding swine, that has fallen under our observation. We have visited the establishment which it describes, and there heard with pleasure the explanations of its intelligent owner, upon the different parts of his plan. And from our desire to profit by his experience, we subsequently requested him to give us a written description of his Piggery, and the management thereof, which he promptly furnished, in a letter that invited us to pursue our inquiries, and these procured for us the more ample details contained in his second letter. It was our wish to publish these communications soon after they were received, but we could not obtain his express permission to make that use of them; therefore, we have withheld his letters from the press until the present moment, when we are assured that the cause of his reluctance has ceased to exist; and that his plan may now be made public, without any prejudice to his interests, or violation of his wishes. This system challenges our admiration, and we cheerfully render it to his head and heart. How few of us take equal care of superior animals! And there are not many who carry equal method into their most important avocations—errors, which may justly be ascribed to defective education. It is easy to perceive in every part of Mr. Ingersoll's proceeding, that confidence which merchants feel in the employment of capital at some risk, and heavy charges, for the production of a probable and fair, although remote profit, through a definite channel. With such hopes and calculations education had made him familiar, whilst it gave him habits of critical investigation that must ever secure to their possessor eventual success in any occupation to which he may devote himself. As a farmer, we perceive that he has derived a handsome livelihood from the cultivation of a few acres of land, and the employment of a small capital, in connexion therewith; whilst there are many proprietors of princely estates, who can scarcely contrive to banish want from their domains. We have pointed to the chief cause of such painful deficiencies—it remains for parents to diminish their number in future times, by taking present and suitable means to qualify their children to pursue their respective occupations with benefit to their families, and advantage to society. And whilst we are zealously laboring to amass property for our offspring, let us not be unmindful of their intellectual treasures, but remember always, that the improvement of these can alone teach them how to enjoy and augment the wealth that we may give.]

Edit. Am. Far.

Brookline, Mass. Oct. 30th, 1821.

Dear Sir,

I have, this evening, received your favor, dated 1st inst. inclosing some valuable seeds, and two numbers of your publication, for which I beg you to accept my acknowledgments. I should feel mortified that your interesting Journal should have been published near three years, without my availing myself of its information—the fact is, I have been a subscriber, through our mutual friends, Messrs. Wells and Lilley, from the beginning.

I am happy to hear of the safe arrival of the pigs, and more gratified that you are pleased with them. It will give me great pleasure to send the boars you wish in the spring; and they shall, as you desire, be of different parentage from those you already have. I am fully satisfied, from repeated trials, that a fine race of animals cannot be kept up by breeding *in and in;* and I have, both in my sheep and swine, two distinct families, which are crossed with each other. And except to supply the number of each kind I want to breed from, the individuals of the same family are never allowed to come together. By attention and strict adherence to this plan of crossing, where both kinds are good, I have a fine healthy stock. The animals are improved, both in size and symmetry, and their disposition to get very fat, at an early age, has been increased. At twelve months old, the pigs you saw in my various pens, averaged 280 lbs.; and many of them exceeded 300 lbs. each. This weight, as they were fed almost entirely upon vegetables, was very satisfactory. A larger race has been often recommended to me by my neighbours. But a large race would not only require more food, but it must also be of much richer, and of more expensive quality. Boiled cabbages, turnips, and other vegetables, whose acreable produce is large, and which constitute the principal sustenance of my own breed, would make but poor returns when given to a larger framed animal.

My establishment consists of twelve breeding sows and two boars, that are kept as long as they bring fine litters of pigs—failing in this, they are fatted, and their places supplied by others of one year old, before they are put to the male. The sows are put with the boars the 1st of April, and the 1st of October, and farrow twice a year. Their inside pens are eight feet by five, and their outside pens are three by four feet. About the time they are expected to bring forth, the styes are littered with straw cut into chaff, very fine, that the little pigs may be dry and warm, without being entangled with long straw, and thus destroyed. The litters are always regulated, so as to leave not more than eight pigs to any one sow, either by changing their mother's, when necessary, soon after their birth, or by removing supernumeraries. I have always found a family of eight pigs at a month old worth more than one of twelve; their growth being so much greater. From each outside pen the pigs have access through a small hole, to a common yard, which is always kept well littered; in which they play—and when dry corn is placed in shallow troughs to induce them to eat as early as possible. Each party knows their mother, and they find their respective pens without difficulty. These pigs are *always* weaned the 1st of April and the 1st of October, at six or eight weeks old, that the sows may be again in the way of their duty, and my system progress. From these pigs I select seventy-two, and dispose of the rest. They are put into twelve pens, containing six each, and are fed with the best food my swill trough affords, six times per day, for the first month, and three times per day afterwards. The inside pens are six feet square, and the outside four feet by six, both planked, with a quick descent, for the dirt, &c. to be carried off. *Much, indeed* every thing depends upon their sleeping dry and warm, and being well littered, and kept perfectly clean. In these pens they remain six months, or until October and April, when they are all transferred to the fatting pens, and their places supplied by the newly weaned pigs. The fatting pens are planked—there is a cellar under them, and each pig is allowed an area of about twelve square feet to live in; for these there are no outside pens. The fatting pens are cleaned out every morning, and fresh litter given. For three months the pigs in them are fed from the swill trough as store pigs; at the end of which time, say January and July their fatting commences, which consists in adding, for each of them, three quarts of cracked corn to their daily allowance of vegetables, for three months, when they are killed as near the 1st of October and the 1st of April as may be. Thus you will observe the 1st of October, and the 1st of April, are busy days in my Piggery, as the little pigs are then weaned, the sows again put to the boars, the fat hogs sold off, the store pigs removed to the fatting pens, and my system completed.

To feed this stock, consisting of
72 pigs from one to six months old, and
72 pigs from six to twelve months old, and
12 old sows, and
2 boars; in all

158 mouths—we boil a kettle of vegetables, containing six bushels, to which is added one bushel of cracked corn, three times a day, and after putting this mass into the swill trough and mixing it intimately, we add as much water as will make 112 gallons, or of each bushel of vegetables and corn sixteen gallons. This swill is then distributed *sweet* and *warm* to the stock, morning, noon and night, with great regularity, in the following proportions, viz.

In October, November, and December—to each of 72 pigs, from one to three months old, one gallon; and to each of 72 pigs, from six to nine months old, three gallons.

In July, February and March—to each of 72 pigs, from three to six months old, two gallons; and to each of 72 pigs, from nine to twelve months old, two gallons, with 3 quarts of corn.

In April, May and June—to each of 72 pigs, from six to nine months old, three gallons; and to each of 72 pigs, from one to three months old, one gallon.

In July, August and September—to each of 72 pigs, from nine to twelve months old, two gallons; and to each of 72 pigs, from three to six months old, two gallons, with three quarts of corn.

8 galls. 8 galls.

And these eight gallons, divided by their terms, or four, shew that on an average, throughout the year, two gallons are required daily per head for the 144 pigs; or equal to 288 gallons; and to our twelve breeding sows, and two boars, we give per day, three gallons each, or equal to 42 gallons; making, altogether, an aggregate of 330 gallons; thus quite consuming our three messes of 112 gallons each. By the different ages of the pigs, as above combined, we have a constant and daily call for the same quantity of swill through the year, so that our business proceeds with perfect regularity.

Baltimore, Nov. 21st, 1821.

Dear Sir,

Your detailed account of the management of your Piggery, has afforded me great pleasure and instruction. And your very obliging offer to send me a list of the vegetables raised for your monthly supply, tempts me, not only to ask for it, but for some other explanations which you likewise proffer. I am anxious to have a summary view of the total quantity of each and every kind of food used in your Piggery per annum—the cost of raising or purchasing the food—the extent of land on which it is, or might be raised—the labor of feeding and attendance at other times—the annual weight and value of the pork killed—the usual number and value of supernumerary pigs—the probable value on your farm, of the food consumed—and the quantity and quality of the manure saved or produced, as well as the cost of an equivalent in manure, if otherwise obtainable I have, you see, some curiosity; but I persuade myself, that it cannot give one so systematic as yourself, any trouble to answer me on each of those points, and in a way to shew me by a glance of the eye, that it is better for you to convert your vegetables and corn into pork and manure, rather than buy manure and sell vegetables; whilst I shall, at the same time, be taught economy and method by your precept and example, which I will endeavour to observe, and imitate at my breeding establishment. I feel somewhat at a loss as to the manner of building my pens; and on the inclosed paper, you will see my doubts exemplified in rough diagrams; your correction on these would particularly oblige me. It is my desire to build them in a long narrow shed; on one side of my barn yard: and to have at one end, cooking and vegetable apartments.

At your request, I am induced to ask whether it would not be better, that is to say, cheaper, to steam than to boil your vegetables? I have seen it stated in the explanations of Scotch implements, published by their Board of Agriculture, in the year 1814, that one person by a simple apparatus, may steam in an hour, food enough, say of potatoes, to feed 50 horses a day, at 32 lbs. for each horse. And I had quite concluded to procure a boiler and steaming box from Scotland, on the strength of that statement.

I have been led to make some inquiries of you in this letter, from an attempt to push your proceedings to their results; as you will see by the enclosed estimates, which will best define the most of my inquiries.

Do you give the swill warm in summer as well as in winter? Do you spay your sow pigs, or put fatting sows to the boar, shortly previous to killing? Have you used the mangel wurtzel, and observed its comparative value or relish? I think highly of it, and wish that it may be fairly tried by every farmer in this country. In our climate it is more certain and productive than any other root. On this head I beg leave, however, to refer you, for my opinions, to No. 5, Vol. III. of the American Farmer, in the notes on Mr. Cooper's account of his several crops. And

I remain truly, Sir,
Your obliged and obedient servant,
JOHN S. SKINNER.

NATHANIEL INGERSOLL, ESQ.

Estimate of Food, Fuel, Labor, &c. employed at Mr. Ingersoll's Piggery, per annum.

6 bushels of vegetables, roots, &c. 3 times per day=18 bushels per diem; for 365 days=6570 bushels per annum, which at 25 cents per bushel,		$1642 50
1 bushel of corn 3 times a day added to the above for 365 days, equals	1095 bu.	
13½ bushels or 3 quarts per day, given to each of 144 fattening hogs, for 3 months or 90 days	1215	
Corn per annum	2310 a 50 cts.	1155 00
Fuel 1½ cords per month, sawing &c. 18 cords,		100 00
Labor 1 man and 1 boy, wages and board		250 00
Yearly value bestowed on Piggery, Dr.		$3147 50

Cr. by Pork and Pigs sold.

142 hogs *a* 280 lbs. 39,760 lbs a 6 cts.	$2385 60	
24 pigs, one by each sow, at each farrow, over and above 8 suckled, $1	24 00	
		2409 60
		$737 90

Shewing a difference lost by using the food in the piggery, instead of marketing it; provided the corn and vegetables are valued at a price at which they could be marketed free of expense, and also return manure enough to keep up the fertility of the soil, which I presume might be done near to this city, if not near Boston.

And if this is practicable near Boston would not the sale of vegetables and purchase of manure, be attended with less care than the piggery, and be more certain? At what price is the manure of stables to be had at Boston, say per load, of given cubic feet, when unrotted? And do your owners of market farms, who have been successful and long established, buy manure, and at what rate? An elucidation of my attempt to estimate your operations, will give me the marketable value of your vegetables at home and in Boston, as well as an idea of the expense of converting them into money by direct sale, all which will be very acceptable and useful to me personally, if you can find time conveniently to furnish it.

Estimate of Land and Labor, required for the Piggery, &c. &c.

For 2310 bushels corn for piggery, a 40 bushels per acre,	68 acres.
For 6600 bushels vegetables, 500 bushels per acre,	14 acres.
Acres for piggery,	72
For the farm purposes to support 2 horses, and 2 oxen, say grain and grass,	16 acres.
Pasturing, orchards, lots, &c.	12 acres.
Acres,	100

Labour required to cultivate 100 acres as above, say 2 hands, 12 months wages and board,	$300 00
For additional labor, spring, summer and fall, supposed to be equal to the expense of 6 hands for 6 months, or 3 hands for a year,	450 00
Annual labour, say	$750 00
A farm of 100 acres of first rate character, might be worth $100 per acre,	10,000 00

And the increase of value, attributable to augmenting population, would be more than equivalent to the wear and tear of utensils and stock employed.

The interest might therefore be considered as rent,	$600 00
Add for taxes,	25 00
And for labour as above	750 00
	1375 00
Then the farmer for his time may be considered as earning on a permanent scale, over and above interest, on his capital, by his piggery, for his own support, provided the manure keeps up the fertility of his soil, about	1034 60
	*$2409 60

Brooklin, December 24, 1821.

DEAR SIR,

I received your favour of the 21st ulto, a long time after its date, and not until it was much worn and chaffed with its travels ere it reached me. I will endeavour to answer your enquiries in detail. The following is a "summary view of the total quantity of each kind of food used in my piggery per annum," and the months in which they are used; beginning with the 1st of July, which is about the time I begin to depend upon summer vegetables, viz:

	bush.
July and August—Mangel wurtzel, roots and tops being the thinings from 2 squares each, containing 32 rods,	800
Summer squashes,	200
Early cabbages,	100
September, October and November—Winter squashes or pumpkins,	700
Large drum head cabbages,	800
Trimmings of mangel wurtzel, turnips, &c. &c.	150
December, January, February, March, and April—Mangel wurtzel,† (roots)	200
Carrots,	900
Ruta baga,	200
Cabbages,	1500
May—Parsnips which were left in the ground during the winter, and allowed to grow in the spring, until their tops are from 4 to 6 inches high, when they are daily dug as wanted, and all boiled,	500
June—Potatoes,	250
Early lettuce, peas, chopped up vines and pods when the peas are full grown, though still green,	250
Bushels,	6550

We always mix the vegetables by boiling some of either kind in each kettle.

My farming, or rather gardening, goes upon the principle of cultivating but little ground, and by great attention to get large crops, and in some instances two from the same land. The farm of one piece constantly in cultivation is an oblong, thus divided with an alley or walk 4 feet wide in the centre.

No. 1 Of the upper side was sowed this year, with mangel wurtzel, thinned out several times as described in a former letter, and finally cabbage plants set out two feet apart, (for a winter crop,) taken from square No. 3, of the lower side.

No. 2. Has now a crop of parsnips left to grow the next spring, to furnish food for the month of May. The frost, however severe, does not injure them, and they are very much liked by the hogs. The advantage of preserving without trouble through the winter makes them valuable.

No. 3. Upper side, produced parsnips that were dug in the month of May, and the 4th June was sowed with carrots. Produce 237 bushels of the short kind.

No. 1. Of the lower side was cropped with carrots this year; of the long orange kind.—Produce 248 bushels.

No. 2. Bore the crop of mangel wurtzel I described to you in a former letter.

No. 3. Cabbages—The ground was laid out in 8 beds, 4 rods long, and one wide; the 12th June, it was sowed with Pomfret cabbage seed, in rows 2 feet asunder. They were thinned out, as plants were wanted to set in other places, so as finally to stand 2 feet apart. Produce 500 bushels.

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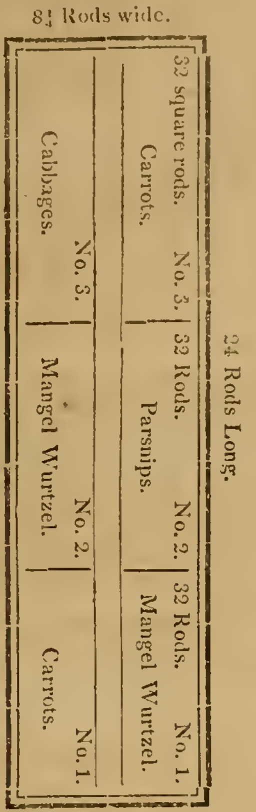
* *See sales of Pork and Pigs.*

† *Cabbages and mangel wurtzel used first.*

This piece of land is constantly cropped in such routine, that the same vegetable occupies the same square once in three years. Each square is annually manured with *well rotted* hog dung, and always at the rate of 4 cart loads for 40 cubic feet. The cabbage square has in addition 20 bushels of unslacked wood ashes.



The aggregate produce this year of the whole 6 squares, or 1 1 5 acres was as follows, viz.

Upper Side.

No. 1. Mangel wurtzel tops and roots all boiled together,	510 bush.	
Cabbages transplanted,	500 do.	
		1010 bush.
No. 2. Now filled with parsnips--no doubt,		500 do.
No. 3. Carrots,		237 do.

Lower Side.

No. 1. Carrots,	248 do.
No. 2. Mangel wurtzel,	533 do.
No. 3. Pomfret cabbages,	500 do.
Bushels,	3028

Upon the borders of this garden ground, which is one rod wide, I have a row of fruit trees.—Under them we have lettuce, early cabbages, ruta baga for transplanting, and such vegetables as our family require. But upon the plat above described nothing grows to shade the crops devoted to the piggery.

A second piece of garden ground, contains a square acre, and is divided into 4 equal parts and cropped in this manner, viz.

¼ acre, early potatoes and peas for family use. Of the peas, those not wanted, are chopped up, vines and all, and boiled in June. This land is cleared soon enough for a crop of transplanted sweedish turnips, or ruta baga.

¼ acre, summer squash. Produce 200 bushels
¼ acre, carrots. Produce this year, 310 bushels.
¼ acre, cabbages, do. do. 560 bushels.

These two pieces of land are my sheet anchor—they are always highly cultivated and neatly dressed, without a weed allowed to seed upon them.

I annually cultivate besides, 3 acres of field land by breaking up 1½ acres, and laying down the same quantity. These 3 acres are cropped as follows, viz.

1 acre Potatoes,	250 to 300 bushels
1 acre Winter squash or pumpkins,	700 to 900 bushels.
½ acre cabbages,	1000 bushels
¼ acre mangel wurtzel,	250 { Ronts, tops, &c. given to sheep and cows.
¼ acre carrots,	250 bushels
	2500 bushels

These crops are an average for the last 3 years. My whole farm, (if it deserves that name,) is only twenty one acres, within a ring fence. Of which one acre or more is occupied by buildings, yards, and approaches to them.

To carry on all my operations I keep two hired men through the year, one of whom however, does the duty of house servant at the same time; and I hire besides day labourers and cattle to plough, to amount of 150 dollars more. It occupies about the whole time of one man, to take care of my stock, consisting of 160 hogs, 60 sheep, 1 chaise horse, 1 cart horse, and one cow; though they are both engaged together, and when the animals are fed, are employed in the gardens in summer, and in winter getting out manure for the next season.

In answer to your question respecting the "probable marketable value of the vegetables on my farm," I would observe that the kinds and quantities of many which I raise, could not be sold at all; as for instance, the mangel wurtzel, ruta baga and all the tops and thinnings of others. Mr. Quincy tells me, he this year sells carrots in Boston, after carrying them 8 miles, at 9 dollars per ton, or 18 cents per bushel. Cabbages are sold by the load at 2 cents each, or about 8 or 10 cents per bushel. Parsnips and winter squashes must be retailed, and pumpkins in any quantity, would not sell for any thing.

To answer your question about market gardeners, I have endeavored to recollect, who among my neighbours have been successful and long established in that line, and I cannot select a single individual who has not driven his own cart to market, until he had sons old enough to take his place, and thus by attending to the minutiæ of the business prevented that fraud and deception, that a gentlemen farmer cannot easily avoid. When I first bought my estate, I sat up a market cart, got a stout horse, and a man well recommended, but my daily receipts kept growing less and less; my man and horse were out late every evening, and after a vexatious and mortifying experiment, I was convinced, that I must either find a market for my vegetables upon the place, and under my own eye, or give it up as a losing concern—for I could not bring my mind to the constant and daily competition, for trifling sums, which a man habituated to it from infancy, rather takes pleasure in.

Manure bought in Boston, costs them two dollars per buck load, of 62 or 63 cubic feet, trod hard and moderately heaped, in its unrotted state. The expense of carting put at the lowest rate, cannot cost the farmer less than $1 50 per load, and when they bring it on hire, they charge $2 50. My whole stock annually furnishes three hundred such loads, which after using all I want, finds a ready sale among the market gardeners in my neighbourhood at 3 dollars per load, they taking it away with their own teams.

This manure is without any mixture of pond mud, sods, &c. which, had I access to such materials, might be very profitably increased.

As it respects steaming, instead of boiling vegetables, the only expense saved is fuel, for the same labour is necessary in filling and discharging them. Our labouring people require to have their work simplified as much as possible, and their judgment not often called into exercise.—Were I to tell my man to steam 18 bushels of vegetables, and to give one third of them 3 times a day to the stock, the consequence would be, that a much greater quantity would be given at one time, than another, and though the whole would be consumed in the course of the day, still the inequality of feeding would be hurtful. Besides in winter, particularly the swill, must be very warm, which could not be at night with vegetables steamed in the morning. Upon the whole therefore, I prefer to say to him, "fill the kettle with vegetables, and after they are boiled away sufficiently to make room, put in one bushel of cracked corn and oats, and give the whole for breakfast," thus marking out the exact line of duty, and leaving nothing to his discretion.

I give the swill warm in summer, and almost hot in winter, and always sweet and fresh. In conversation with Mr. Derby, he argued upon the propriety of feeding with sour food, and that cold. I have formerly tried it, and satisfied myself it was wrong. Pigs may be habituated to eat it, but place his cold sour stuff in a trough, and a good smoking hot breakfast of mine in another beside it, and I will venture to say, they will soon show a preference.

I never spay sows, because *we have no one who knows the mode*, which is to be regretted. They are sometimes admitted to the boar a few weeks before killing.

In yours received yesterday, through Wells and Lilley, you ask my opinion of the Byfield breed of hogs. As breeders they are the worst I know. The sows have small litters and destroy them oftentimes by laying down without any care. They are long coarse haired animals and very apt to be mangy, nevertheless to mix with almost any other breed, a Byfield boar is valuable, being a quiet race and disposed to get fat at an early age.

The Bedford is a hardier kind, and make good nurses. But for our uses have too much lean meat in proportion to their fat—their hams from that circumstance are excellent—a cross between a Byfield boar, and a Bedford sow furnishes a profitable and handsome stock.

Inclosed is a sketch of my piggery. I thought it might assist you in determing the mode of building yours—I find mine convenient, and know not, that I could alter it advantageously.

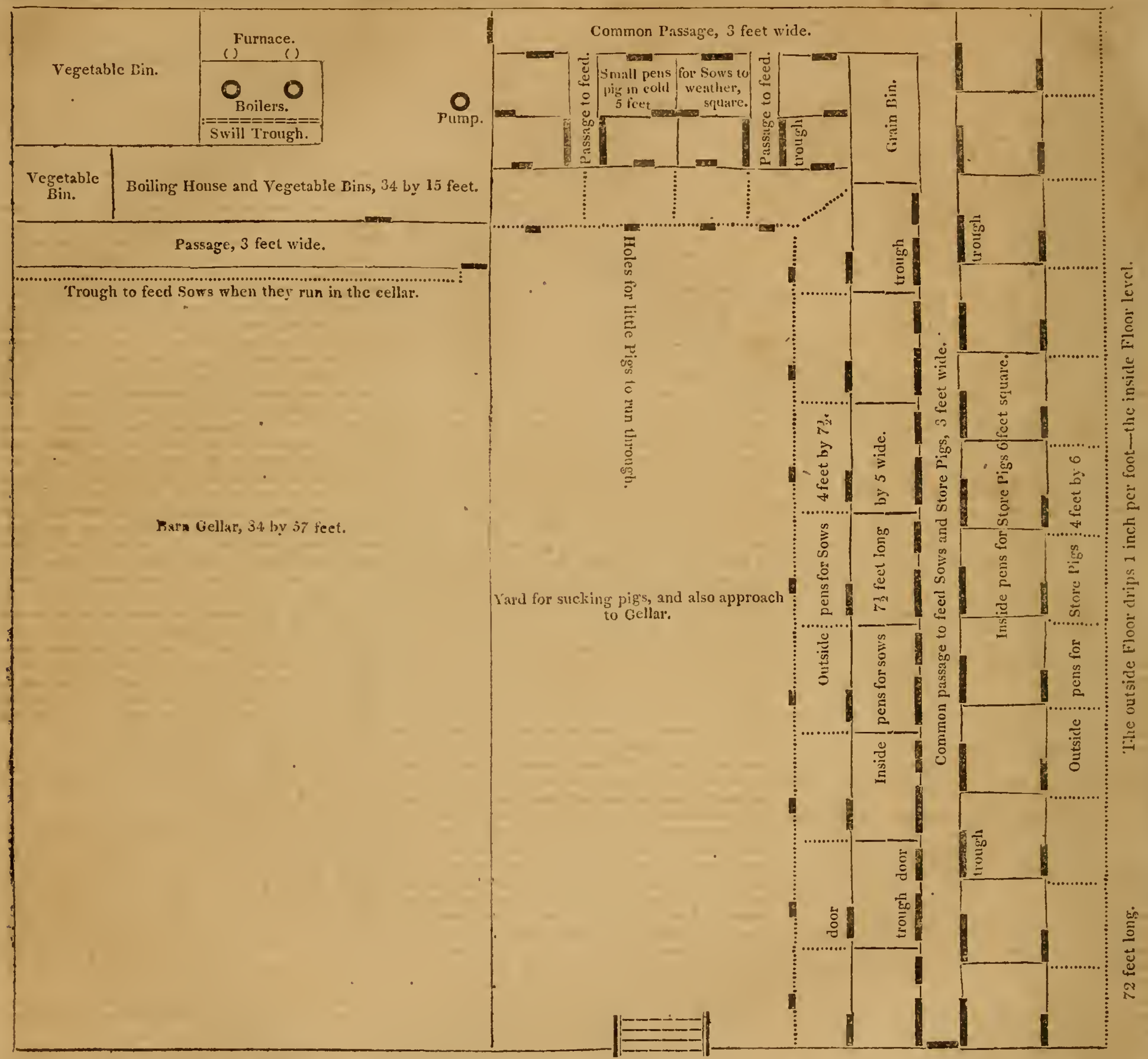
I have thus, my dear sir, attempted to give a comprehensive answer to your interrogatories: if there is yet any thing not perfectly clear to you I shall be happy to explain.

My letter has run on to a great length, but your politeness I trust will excuse it.

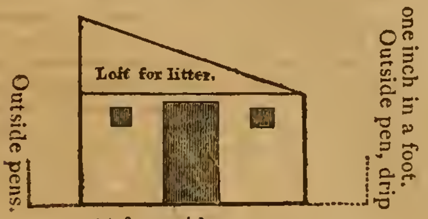
Your obedient humble servant,

NATHANIEL INGERSOLL.

J. S. Skinner, Esq.


Vegetable Bin.
Furnace.
Boilers.
Swill Trough.
Pump.
Vegetable Bin.
Boiling House and Vegetable Bins, 34 by 15 feet.
Passage, 3 feet wide.
Trough to feed Sows when they run in the cellar.
Barn Cellar, 34 by 57 feet.
Common Passage, 3 feet wide.
Passage to feed.
Small pens for Sows to pig in cold weather, 5 feet square.
Passage to feed.
trough
Grain Bin.
Holes for little Pigs to run through.
Yard for sucking pigs, and also approach to Cellar.
Outside pens for Sows 4 feet by 7½.
Inside pens for sows 7½ feet long by 5 wide.
trough
trough
door
trough door
Common passage to feed Sows and Store Pigs, 3 feet wide.
trough
Inside pens for Store Pigs 6 feet square.
Outside pens for Store Pigs 4 feet by 6
trough
The outside Floor drips 1 inch per foot—the inside Floor level.
72 feet long.

I have attempted to proportion the Building upon a Scale of 10 feet to an inch. [Gate.]



14 feet wide.
72 do. long, posts 6½ feet.

I have found it necessary to have communication with all the pens, from the principal *inside* passage for the facility of moving the sows and store pigs, because outside doors are apt to be frozen down in winter. The spaces at the ends of the troughs, are therefore sliding doors, as all others are. The 4 pens near the boiling house, are made tight with covers, for sows to farrow, in very severe weather. The hogs are all fed from the common passage under cover. They eat more comfortably, and the troughs are never filled up with rain or snow. The outside pens of the sows, when they have pigs, are cleaned into a cart, and the manure carried away, that the yard for sucking pigs, may always be clean—and where they will soon learn to eat whole corn, if placed in shallow troughs. They have holes sufficiently large for them to run out of.

Since you were here, I have been obliged to new lay the floor of my piggery, and have now arranged the pens comformable to the above sketch. I have also dug a well in the boiling house, and have the nose of the pump placed high enough to carry water into the kettles.—Should my spring fail, I shall by spouts, conduct the water that falls in rain upon the building, into the well. My fatting hogs you will recollect are fed upon the barn floor, and cleaned into the cellar, where the sows run before they pig.

ADDRESS of J. M Garnett, Esq. President of the Fredericksburgh Agricultural Society—delivered at their Exhibition at Fredericksburgh, on the 12th and 13th of November last.

Mr. Garnett's Address.

Once more, my fellow citizens, we are permitted to unite in witnessing and celebrating a spectacle which ought to be, and I trust *is*, in reality, highly gratifying to us all. The great accession ot spectators beyond what we had last year; the much augmented number of competitors for premiums; together with the manifest improvement in the quality of the animals and articles exhibited—all afford unquestionable proof, that the spirit for agricultural improvement which we have so long labored to excite in this part of our state, has at last been effectually awakened. How long it may continue, depends upon yourselves; but now that you have had such satisfactory evidence of what it can effect, in the short period of twelve months, I must indulge the hope, at least in regard to all who are with us on the present occasion, that *their* efforts in the good cause will never be wanting. Few portions of our country have greater capacities for amendment of condition, or stronger motives to call them into active operation. For nothing appears to me wanting to insure a great degree of prosperity, both to town and country, but a few very practicable improvements in your roads and navigation. Nor should it be made a question, where the interest is so obviously a common one, whether country or town would first begin to derive benefit from them. It is entirely immaterial at which end you begin; for the process may very aptly be compared to that of ditching ground that wants it, where a profitable increase of dimensions is the certain consequence of beginning at all. These are views which some, perhaps, may deem too sanguine. If there are any such, I would say to them, it is always best to anticipate good, rather than evil; and let what may happen, we should adopt as our constant motto, the heroic exclamation of our gallant countryman—"Dont give up the Ship." No, never "while there is a shot in the locker," let either sailors, or their brethren of the soil, yield to indolence, despondency, or fear, in their labours for their own, or the general welfare.

Such considerations are more necessary, I think, for us Agriculturists, than for men of any other profession; for none seem to have less power to bear up under actual adversity, or to meet, as they ought, the threatening approach of it. The cause of this I do not pretend to explain; but the fact I have had frequent occasion to remark and lament. Is it that we are worse economists than other people; that from keeping no regular accounts, we more frequently live beyond our incomes; or that the means of our subsistence, being more liable to great and sudden fluctuations in price, we oftner experience the trying vicissitudes of abundance and scarcity in our pecuniary resources, than the individuals of other professions? An empty purse is a marvellous damper of the spirits, I believe, with all; but I know none upon whom it appears to have such an effect as on the planter and farmer. You may tell him, when in this woful predicament, by his care-stricken and doleful visage, as far as you can see him. If his temper happens to be of the acid kind, his countenance in a cheese-making dairy, might save all the expense of rennet in curdling the milk; but should his disposition be of the milk-and water character, all hypochondriacks should carefully shun him, as nothing would sooner bring on their customary fits of the blue devils, than his looks. If I am right in the opinion, that the exertions of the agriculturist are more easily checked by any discouragement than those of other men; it is easy to explain why we have been so hard to rouse from the torpor under which we have labored for some years past. Agricultural products have fallen in price far below what they once were; and although the obvious remedy for the inconvenience resulting from this very unpleasant state of things, was *economy*, yet few, or none, would adopt it, until they were forced. Abstemiousness in the use of money, is a virtue which most farmers find as much difficulty in practising, as abstemiousness in food or drink; yet both are acknowledged to be of sovereign efficacy. In vain does the dietetick physician prescribe the last, in diseases of the body, and Dr. Prudence recommend the first, for diseases of the purse; the irresolute, self-indulged, self-devoted patients turn a deaf ear to both, until Dr. Necessity lays his iron clutches on them; and then, alas! the abstinent course often comes too late. For instead of the manful, resolute, and persevering struggle, essential to the cure, which can be effected by nothing short of the timely and complete conquest of habits superinduced by pampered appetites for luxurious food, raiment, or other pageantries; the miserable victim of excessive indulgence becomes a querulous, moping, melancholy drone, incapable of almost any evidence of being alive, but sighs and groans. And what are the mighty causes that produce such apparent complication of wo? Why truly, in most cases, (for few are so desperate, as to be altogether remedyless,) because the conviction has at last been forced upon the reluctant convert to the necessity of economy, that the long impending hour has at last arrived, when country brandy and whiskey must be substituted for imported spirit, and wine; when extra super Saxon, and the finest Irish linen, must give place to homespun; when riding must be performed on horse-back, instead of being in the costly carriage or gig; and when fewer ribbands, feathers, and other frippery must be purchased, for those who probably attach much less importance to them than he does. But is there a man who deserves the name that ought not to be utterly ashamed of such childish weakness? Is there a woman, who has the slightest claim to the admirable character of a Virginia matron, that would not most cheerfully encounter any privation necessary for the good of her family; or who has ever neglected to inculcate similar principles on the minds of her daughters?—I fully believe that there is not; nay more, I am thoroughly persuaded, that where economical reforms become necessary—no matter from what cause, there are very few husbands who would set themselves earnestly about them, but would not be met more than half way by their wives. The chief reason why the latter are so often and so unjustly charged with the whole blame of wanting thrift, is, that the former too frequently prove insincere in their proposals to adopt the saving plan; and when this is the case, the wives very naturally think—if ruin *must* come, that they have a right to commit their full portion of the waste. If the husband guzzles away a part of his substance in places of idle resort; or spends it in gambling, or in any other selfish indulgence; he has no right to be surprised, should his wife squander away all she can lay *her* hands upon in whatever may appear to *her* a gratification. For although it will prove but a poor excuse in another world, for our culpable conduct in this, to say that we have done wrong because we saw others do so; yet, in that most important and sacred of all human copartneries, called marriage, faults in one party will almost always provoke, if they do not extenuate the [illegible] the other—for neither has a right to claim, that all the good examples necessary in both, should come solely from one side. A very foolish and most destructive pride has frequently no small share in this business of mutual wastefulness—the individuals concerned, being more ashamed of reformation, than of perseverance in extravagance. But surely, true honor, true morality, and true religion—all tell us, that the nearest approach which human beings can make to perfection, is resolutely to correct our errors as soon as possible after we discover them.

It is undeniably true, that we agriculturists have, for some time past, had many difficulties, and not a few enemies to encounter—such as low prices for produce, bad seasons, and foes of the insect tribe, as formidable as either. But so far should these be, from either checking or extinguishing our efforts, that they ought to be considered only as increased demands on us for extra exertions. Economy will greatly alleviate the effects of the first; good and judicious tillage, with plentiful manuring, are a sure protection against the second—unless they are unpropitious to a very unusual degree; and as for the last, I am strongly inclined to believe, that we should subdue them effectually, if we would practice for their special use the maxim—"Fight the Devil with fire." Very many of these noxious pests are known to take up their winter habitations above the ground, in the different parts of the various plants which cover its surface; and especially in our arable fields. All insects thus located, would unquestionably be destroyed by burning off these plants, either as soon as they would burn, or late in the winter, before the warmth of spring had put their inhabitants in motion. And even on the supposition that the fire might, in some degree, injure the land, (which is by no means certain,) the experiment would surely be worth trying once or twice; for if successful, it would rid us of an enormous evil, with great despatch, and little or no expense. This process would also prove a powerful auxiliary in exterminating all those noxious weeds which are propagated from seed; and would thereby greatly facilitate the culture of artificial grasses, of which we are so much in need. I well remember when it was the constant practice to burn off every thing, (but especially broom-straw,) which threatened to be any great impediment to the plough; and in those days we had neither Hessian fly, chintz-bug, nor grass caterpillars. I mention this fact, because I think it well worth examination. All who are as old as myself, I am sure will recollect it; and although I will not assert that we owed our exemption to fire, such a coincidence appears very much like cause and effect. That this practice originated in sheer laziness, I have very little doubt; but that it may have had the beneficial operation which I suppose, seems to me highly probable. Should this conjecture be correct, it will furnish a strong reason, among many others which might be urged, to prove that it is not less wrong to discontinue, entirely, any agricultural practice, merely because it is old, than it is to adopt any, simply on account of its being new. We may commit gross errors both ways; and the sanguine credulity that would lead us, unhesitatingly, to follow every innovation upon established customs, is no more a proof of a liberal, enlightened mind, than the mulish obstinacy and disbelief which would shut both eyes and ears against every agricultural improvement whatever. In truth, the giddy, ever-changing projector, who greedily adopts every novelty in husbandry, be it what it may, is equally an object of pity or ridicule, with him who would fix it as a conclusive evidence of the superior excellency of any process in farming, that it was followed by Father Noah and his family, as soon as the waters of the Deluge had sufficiently subsided to admit of cultivating the earth. Yet we have not a few who belong to each class of wrong-headed people; nor can agriculture ever arrive at that state of perfection of which it is susceptible, until both species of folly can be cured. The first, by their precipitate, ever-varying industry, are constantly in danger of discrediting every invention, however useful—every practice, however promising; while the last, with their good will, would prevent improvement of all kinds, by stamping with the indelible stigma of rashness and folly, every deviation from what they had been accustomed to see from their infancy. One party, provided they can have a hobby as often as they wish, care very little whether it is a boar or a ram, a bull or a cow, an agricultural machine, or a process in husbandry. The other treats with ineffable disdain and contempt all opinions different from their own; and would be as much ashamed to be caught at making what might be called "an experiment," as they would of a really disgraceful action. Between the two, the true interests of agriculture suffer incalculable mischief. For what can be much worse for those interests, than for a numerous class of her sons to deem themselves far too wise to be instructed in regard to their profession by any thing in writing or printing; while another class require no better reason for dashing at every thing, than to have seen it in a book. The truth is, that the middle course in this, as in many other matters, is the right course. We must learn to avail ourselves of the experience of other people, if we would ever grow wiser, either as farmers, or any thing else; and that experience, since printing has supplied the place of tradition, we *must* get from books, or not at all. It is a gross mistake, and the fruitful source of much of our ignorance in our profession, to consider most of the numerous volumes published on the various branches of husbandry, as merely theoretical. The fact is directly the reverse; for the greater part of them are the authentic records of actual practice, as much so indeed, as any law reports that have ever been published. From these last, none are so blind and stupid, as not to perceive that the lawyers derive infinite advantages; and why should not the farmers be equally benefitted by making themselves thoroughly acquainted with *their Reporters?* Blended with these reports, indeed, we often find the conjectures of the writers in regard to the causes and effects of the phenomena which they record; and these conjectures, if they are as wild as they frequently prove to be, are the theories that bring discredit both on the science and practice of our profession. But surely the facts and experiments which a man publishes, are as distinct from the speculations that he may chuse to enter into about them, as he is from his coat; nor need we adopt any part of the last, in availing ourselves of the first. The latter alone, can, with any propriety, be called theory; for the former are nothing more than the materials upon which all theories are founded, and may be used equally well, according to the skill of the workman, to build a good one, or a bad one. The anti-theorists, in addition to the gross error of misunderstanding the true meaning of the term which they so much reprobate, commit another mistake still more fatal to their own improvement. They either cannot, or will not see the immense saving in point of time, which we make in acquiring a competent degree of skill in husbandry, by consulting books, as well as men, on the subject. For in this way we become acquainted with the practice of ages in a few weeks or months; and may learn more in a year, than we could in a whole life, if we relied entirely upon our own solitary labours and observations.

One of the many advantages of such scenes as we now behold, is to dispel these most irrational and truly ridiculous prejudices against books on agriculture. For we here have many occular demonstrations that the hints taken from them, can procure for those who judiciously use them, both emolument and distinction. We here learn another lesson, of at least equal, if not superior utility; and this is, to think somewhat more modestly of our own agricultural knowledge, than we are apt to do, when we confine ourselves continually at home; where we have neither rivals, nor friendly advisers of more skill than ourselves to apprise us of the progressive improvements daily taking place in the world; and to stimulate our endeavours to keep pace with them. We learn to contemplate our own pictures with less partial eyes, and to deem it not only very possible, but quite probable that nothing will sooner expose us, (and deservedly too) to be laughed at, than the self-admiration and inflation of men exceedingly wise in their own conceit, so apt to be contracted and displayed by all who long pursue, without question or contradiction any practice—no matter what, which they have dignified with the name of *System*, and formed a habit of calling *their own*. This foible, or mental disease, rarely afflicts men who mix much with the world; and if we agriculturists can either escape, or learn to controul it, by meeting together once or twice a year on so pleasant an occasion as the present, we surely have an additional motive of no small value, to encourage our Show and Fair. Another advantage which we gain by thus gathering together our brethren from distant parts of the country, is, that we learn to despise that pitiful selfishness often contracted in seclusion, which leads us to believe that we live only for ourselves; and must therefore lock up in our own bosoms all we may happen to learn of husbandry, on the principle that "the still sow sucks all the swill." But although this may be a very good maxim for a pen of hogs, yet as a rule of conduct for men, nothing can well be more contemptible, base, and degrading. In fact, a readiness to communicate what we know, without vain boasting, or arrogant pretension, is not only a constant characteristic of an ingenious, liberal, and enlightened mind; but is one of the most useful and laudable dispositions a man can have. It is particularly becoming in the agriculturists who supply the staff of life to the whole race of civilized man: nor can there be any occasion better calculated to elicit, if not actually to create it, than one like the present. Here we have also, an excellent opportunity of comparing the results of our respective experience; here we see various demonstrations of what great things a little agricultural skill, industry and perseverance can effect; and here we can most conveniently fraternise together in regard to our mutual wants, hopes, and interests. The yeomanry of our land, above all people in it, should seek and *make* occasions to act in concert; and yet they rarely ever think of it. They are the primary support of all other classes in the community, by supplying most of the necessaries of life; they chiefly furnish, when needful, the sinews of war—men and money; they are the paymasters general, either directly or indirectly, for every purpose; and yet when their dearest rights are assailed; provided it only be in a *domestic way*, no people on earth are so entirely quiescent and passive under such injurious treatment. Meetings like the present, either do, or certainly might bring these matters more frequently to our minds; and if they had no other effect, this alone would render them worthy of encouragement. We greatly deceive ourselves, and may do it most fatally, by continuing to believe, (as too many of us seem to do,) that because the agriculturists constitute a great majority of the nation, therefore the agricultural interest predominates in our public councils. The slightest enquiry into the composition of these councils will prove that such belief is very far from being true; for although most of the representatives of the different states may be *landholders*, yet agriculture is a very subordinate interest with the greater part of them. And this fact furnishes the solution of all the attempts made of late years—and which failed, the two last times, only from accident, to tax us enormously for the benefit of a particular and very inferior class—at least in point of numbers—Having so frequently introduced this subject at our former agricultural meetings, I shall do nothing more at this time, than to avail myself of the present opportunity, publicly to warn all my agricultural brethren, as far as my voice can be heard, that this most unjust and pernicious project will in all probability be consummated at the next session of Congress, unless the yeomanry throughout the United States shall hold public meetings, and plainly say to their Representatives—"thus far, gentlemen, shall you go, but no farther. To *equal taxation* we will most cheerfully submit; and to *any amount* that the public good may require. But venture not, as you value your places, to tax us for the benefit of any local or minor interest whatever" From all quarters our public Journals tell us of the flourishing condition of our manufactures, even with the present taxes in their favour. At the same time we hear of the depressed state of our agriculture; and we know and feel the effects of this depression in all our concerns; this none can deny. And yet, in flagrant violation of every principle both of justice and policy, the suffering class, being the majority too, is required to encounter still farther depression for the benefit of the prospering class. This is so great an absurdity in point of common sense, and so gross—so crying an outrage upon the plainest dictates of common equity, that no man in his senses could believe it ever would be attempted under a government founded on the representative principle, unless he saw it. But I have done with this topic—deeply and vitally as it affects us all. If the magnitude and near approach of the danger are insufficient to rouse those who are to suffer most from it, they would disregard the voice even of one who rose from the dead to incite them to self-defence.

And now, my fellow-citizens, permit me, before I conclude, to submit for your consideration, a few remarks relative to the Premiums, which are now ready for distribution, and to the views that we should all take of their design, as well as of the effects which we hope may result from them. Not that I will presume you to be ignorant on these interesting subjects; but the fact is, that the best informed among us, often require to be reminded of matters which, although they deeply concern us, are yet, not always present to our minds, when they should be. Let me then, beg you to recollect, that the sole object of such premiums as we have offered, is to apply additional excitements to that laudable spirit of generous emulation which should always exist between the sons of the soil—the brotherhood of agriculture; and which is as remote from every thing like envy or jealousy of our competitors, as it is from the niggardly passions of cupidity and avarice. Where this spirit prevails, as I trust it does in the present assembly, there cannot possibly be any just ground of complaint at the awards which may be made to promote its farther extension. Permit me, therefore, once more to express the hope, that as all the candidates for premiums cannot be successful, those who fail will do us the justice to believe, that the deserts of what they have offered, have been fully and impartially weighed; and if they cannot admit the correctness of our judgment, we confidently trust they will at least acquiesce in the equity of our decisions. To excel in *any* useful art or science is no small merit; and to have that merit publicly recognised, as it is on occasions similar to the present, is no inconsiderable praise. The immediate and ostensible benefit, accrues, it is true, chiefly to a few individuals; but a large portion of the honour is reflected on the society to which they belong; and there are none of us but may ultimately derive permanent advantages from these individual successes. Every improvement in husbandry, thus publicly elicited, is, in fact, the realization of so much agricultural wealth; and becomes a part of the general stock of agricultural knowledge which is to enrich the whole body of our yeomaory; to augment their importance and utility; and to adorn our country with every thing that can contribute to the comfort, independence, and happiness of our people.

These, my friends, are the sentiments which meetings like the present, appear to me, specially well calculated to call forth. They are as beneficial, animating, and honourable, as they are delightful. Nor can any thing better serve to cheer our progress in our various avocations; to invigorate our hopes; and to elevate our profession to that eminence in public estimation which it so justly deserves. Let us cherish this society then, and a similar yearly appropriation of the principal part of its funds, as the most efficient means to promote within the limits of our influence, the great, the vital object of agricultural improvement; and let us join our hearts and our hands in cordial pledges never to relax our efforts in maintaining our good cause against all the discouragements by which we may be assailed.

POPE'S THRASHING MACHINE.

[The following letter should have appeared soon after its date, but being placed on a file of *letters*, instead of our file of *communications*, it has been overlooked.]—*Edit Am. Far.*

TO THE EDITOR OF THE AMERICAN FARMER.

Philodelphia, December 9th, 1823.

My Dear Sir,

I observed in the American Farmer, that in the report of the Committee on Machinery and Implements, at the late Maryland Cattle Show, they gave it as their opinion, that my father's Patent Threshing Machine "was, in fact, a Scotch machine, as constructed by several of our mechanics, and as imported by Mr. Dawson, reduced within the power of one horse." If this *is* the *fact*, the idea is a new one, and has escaped the penetration of both the Pennsylvania and Brighton Agricultural Societies; at Brighton, a Scotch machine adapted to hand power, has been repeatedly exhibited. I should presume that the fact alone, of my father's machine, possessing capacity to thrash nearly, or the same quantity of grain as the Scotch machine, with the power of one horse only, and at one quarter of the expense of the latter, sufficiently demonstrative of its being a very different one, without further enquiry But I deem it necessary to observe, that were the cog wheels of the Scotch, applied to the beater of my father's machine, the principle on which its action is grounded, would be destroyed, and the machine be rendered useless. (This is an important fact, and argues strongly in support of the originality of the invention.) This is obvious, as the axes of the beater are not confined to their centres, (nor the feeders either,) they being at liberty, give the beater an opportunity to rise, that the straw may pass through with freedom. Thus the beater lifting during its momentum, and at the same time being upon the straw against an open circular rack flooring, constitute the thrashing principle; whereas, on the contrary, the axes of the beater in the Scotch machine, are confined to their centres, and whatever resistance the straw may make, is only overcome by augmented power. The only resemblance the machine has to the Scotch, so far as I can perceive, is in the beater only, setting aside its *different proportions*; but I think, my dear sir, it bears a much stronger resemblance to the cotton picker, for that too would thrash.

I remain, my dear sir,
With much respect, your's, &c.
JOSEPH POPE, Jr.

SHEEP—LARGE AND SMALL.
AGE OF TREES.

Dis't. Col. Dec. 21st, 1823.

Dear Sir,

I was struck, sometime ago, with an address (I think it was) of Ransellaer, to an Agricultural Society, in which he is very long, and seems much convinced of the superiority of large sheep to the merino; and makes his calculations thereon. I wrote you on the subject, stating his errors, which were these, that the land that would maintain five hundred large sheep, would maintain one thousand merinos; and that five hundred merinos might be kept on land that would not keep one hundred large sheep: of this latter, I am well convinced, I was prevented by something from finishing my letter, and it was finally lost.

I now send you an account of the antiquity of trees. On my place there stood about sixty yards north of my house, three large oak trees, their bodies about from two to three feet diameter, and about fifteen feet long, standing by themselves; they had spread much, and grew like apple trees, and had a venerable appearance in 1790—the largest died in 1791—I cut it down, it was thirty inches across the stump of sound wood; indeed the whole tree was sound. I was building a stable and barn, and had it sawed into studs four inches through; when we came to the centre of the tree or stock, the sawyer found great difficulty in getting on, and their saws were much injured, but when we opened the stock, we found four or five spike nails, whose points had crossed each other, or passed each other, in the centre of the tree, which were cut in two by the saw, and spoiled four of the studs, and injured some of the adjoining ones. I think the heads of the nails must have been six inches from the centre of the tree; on recollection I found that prior to the year 1740, and in that year my mother's first husband had kept store there, and that these nails had been driven in to hitch horses to; as the tree was thirty inches across, and allowing three inches to hitch the bridles on, the tree must have grown two feet, say one foot every way, from, say 1738, until 1790—fifty-two years. I have now a fine thriving white oak, two feet through, that in 1790 was only twelve inches in circumference.

[It is lamentable to reflect upon the neglect with which this invaluable animal—the merino sheep is treated in our country—only a few years since, and we seemed well aware of the pleasure we had gained in having added this race of fine fleeces to our long woolled stock but already they appear to be almost abandoned. When visited again, as we fear we shall soon be, by war and its inevitable calamity, *a large national debt*, those who have suffered their fine flocks to degenerate and die—will repent of their improvidence.

N. B. ☞ Have the people sufficiently attended to the remarkable suggestion of that enlightened statesman, Governor Clinton, that there is no instance of a large national debt ever having been paid off?]—*Edit. Am. Far.*

North Carolina Gold.—We have seen several accounts in distant papers, of native gold having been found in Montgomery and Anson counties in this State, as well as in Cabarrus; but having received no satisfactory communication on the subject from any of our friends, we have never noticed these discoveries in the Register. But there is now, in the possession of Mr. Barker, travelling merchant in this city, a specimen of this gold, which we have seen. It is a lump of the pure ore as found in Anson, weighing about 1½lb. worth about $340; and we learn from a gentleman well informed on the subject, that larger pieces than this have been found in the two first mentioned counties, and that there is at present, in the Branch of the State Bank at Salisbury a bar of this gold, which, after being purified, is worth between 5 and $600.

We have not heard that any person of science is engaged in the business. These large pieces of gold are met with occasionally, though what is collected by the persons who are engaged in the search, is mostly in small particles, which do not much more than compensate them for their labour. Were the business conducted with proper skill, it might prove a source of wealth to its proprietors, and be of great advantage to the State, in adding to its metallic medium.

[*Raleigh Register.*

Extracts from late Numbers of The London Farmer's Journal, received at the Office of the American Farmer.

Savings Banks.—The following is a statement of Bank half-yearly dividend warrants (April 12, 1823,) as issued in October and January preceding:—

	£	No.
Not exceeding	5	90,755
Ditto	10	41,295
Ditto	50	99,582
Ditto	100	26,049
Ditto	200	15,459
Ditto	300	5,141
Ditto	500	3,243
Ditto	1000	1,372
Ditto	2000	487
Exceeding	2000	215
		283,958

The amount of Savings Banks Deposits piad into the Bank (same date) was £7.323 179.

Upon this last amount some important observations arise. The sum, above *Seven Millions and a Quarter!* is immense; but its distribution leads to a curious result. The number of depositors in the Provident Bishopsgate Bank to 31st March, 1823, was 7320 persons, and the amount of its deposits £186,345, being £25 9s. 1d. each depositor on the average Adopting this as the general average throughout the kingdom, if the sum of £7,323,179 be divided by £25 9s. 1d. it follows that 288,195 persons *are interested therein!* which gives 4237 persons more than the number of stockholders in the Government Funds! But as the proportion of £25 9s 1d. is probably much higher than belongs to the country depositors in Savings Banks, the number will be much greater; and this interesting confidence of the industrious classes in the stability of the country, is undoubtedly a great public benefit derived from the Savings Banks.

It may not be generally known, that a round thin plate of soft iron, fixed on a lathe spindle, and turned with great rapidity, is capable, in a very surprising manner, by the motion of its edge, of cutting hard steel; the groove in the steel acquiring an intense heat, without the same degree of heat penetrating the soft iron.

It is recorded, that when Spenser had finished the *Faery Queen*, he carried it to the Earl of Southampton, the great patron of the poets of those days. The manuscript being sent up to the Earl, he read a few pages, and then ordered his servant to give the writer twenty pounds. Reading further, he cried in a rapture, "Carry that man another twenty pounds!" Proceeding still, he said, "Give him twenty pounds more." But at length he lost all patience, and said, "Go turn that fellow out of the house; for if I read on, I shall be ruined."

We have heard of the fall of Lucifer, and the fall of Cromwell, and the fall of Wolsey; but one of the pleasantest tumbles upon record, was that of a Mr. John Fell, who, when he removed from one part of the metropolis to another, wrote over his door—"*I Fell from Holborn Hill.*"

Mr. Orten, surgeon, 34th regiment, has explained the cause of fowls dying so often on shipboard. It is want of sharp cornered gravel to triturate corn in the gizzard. This he discovered by dissecting one of the dead fowls.—"The next step was to take advantage of the information thus gained; but the maxim that 'knowledge is power,' seemed likely to meet with an exception in this instance; for we were many hundred miles from land, and there appeared little chance of finding any substitute for proper gravel on board the ship. Inquiries were made for a stone, by which the experiment might be made with a few of the fowls; and it was soon found that abundance of a rock, resembling granite, had been taken on board as ballast at St. Helena. A quantity of this was immediately broken up into pieces, about the size of split peas, and given to the poultry. They swallowed it eagerly. The sick birds were collected, and a quantity of the specific placed before each; and though most of them were unable to stand, they devoured it with eagerness, several in quantities of a table-spoonful each. They all recovered except one. In short, the mortality from that time entirely ceased and the remaining poultry (by far the principal part,) instead of dying, became excessively fat. Fowls, when allowed to run about, are observed to be very nice in selecting the pieces of stone which they swallow. In many of those which I dissected, I found pieces of broken earthenware, chosen doubtless on account of their sharp edges. I would recommend hard stones to be laid in for fowls on board ship, and broken up, instead of natural gravel, which is commonly more or less rounded. River or sea sand, or gravel, is evidently useless."

(From the *Bombay Gazette*, May 14, 1823.)—The friends of Captain Gambier, R. N., will peruse with interest the following account of a most miraculous escape from immediate destruction;—"On a recent elephant shooting party at Ceylon, Captain Gambier and Mr. Hay, of the Royal Engineers, had separated from their companions, and were following a large female elephant; when pretty close to her, she suddenly and unexpectedly turned upon them; escape appearing impossible, they both fired, but with little effect; the animal immediately charged, knocked Captain G. down, and pursued Mr. Hay, who fell; Captain G. having recovered, and observing the imminent danger of Mr. Hay, gallantly ran with another gun to his assistance. The elephant, on perceiving Captain G.'s approach, turned round, seized him with her trunk, and raised him from the ground with as much ease as if he had been a straw; she then knelt down, and laid him on his back, still retaining her hold; she now began gradually to lower herself, and he already felt the pressure which appeared the forerunner of certain destruction, when, most unaccountably, the animal suddenly rose and retreated, leaving him without other injury than a severe bruise on one knee, which he probably received when she first knocked him down in pursuing Mr. Hay. So providential a rescue from apparent certain death may perhaps be accounted for by the elephant having been confused by the firing, or by her alarm at becoming so far detached from the rest of the herd."

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 2, 1824.

☞ At the last meeting of the BOARD OF TRUSTEES of the Maryland Agricultural Society, it was unanimously resolved, that J. S. SKINNER, Corresponding Secretary of said Society, be requested to attend in person, at Annapolis, to explain the views of the Society, in relation to certain legislative enactments, the benefit, whereof, the Society has determined to solicit from the General Assembly.

☞ GEN. R. G. HARPER, DAVID WILLIAMSON, Jr. and J. S. SKINNER, were appointed a committee to prepare a scheme of premiums to be awarded at the next Agricultural exhibition, on the Western Shore—said scheme to be submitted for consideration to the Board of Trustees at their next meeting.

☞ The next meeting of the Board of Trustees of the Maryland Agricultural Society is fixed for Wednesday, the 14th January, 1824—to be held at the residence of GENERAL R. G HARPER, and to commence at 12 o'clock—as the scale of premiums is then to be adjusted and fixed, the punctual attendance of all the members is very desirable. There will be other business of importance submitted for consideration.

☞ It will be recollected that it has been made the duty of the President of the Society, the Treasurer, the two Secretaries, and every member of the Board of Trustees, to obtain the signatures to subscription papers, of such persons as are willing to become members of the Society, and to contribute *five dollars per annum for five years.* These papers *must be returned at the next meeting of the Board*, as their application to the Legislature will have reference to, and be regulated in a great measure by the success of this effort to procure regular subscribers *for a specified time.*

It is needless to dwell on the importance of *early* and *earnest* attention to this duty, by such of those to whom it has been assigned, as really feel interest enough in the character and success of our institution, to induce them to *work* a little, as well as talk, for its benefit.

The prospects of the Society for improved character, and extended usefulness were *never so flattering as at present*; but for these results it must obviously depend on its EXECUTIVE OFFICERS, and they will never accomplish any thing for its benefit—its reputation, or its perpetuity, by mutual endeavours to push the burthen of responsibility, and of active duty, from their own to other shoulders. Honors should be declined by those who imagine the duties associated with them, to be too humble or too onerous. In the case in question, if the President of the Society, the Treasurer, the Recording and the Corresponding Secretary, and the twelve Trustees, will exert themselves to procure each, only *ten* subscribers, which may be easily done; from that resource alone, we should derive a *certain* fund of $800 per annum, for five years; and if such of those as are able, choose themselves, to *make up* in amount the deficiency in the *number* on their list—*there is nothing in the constitution to prevent it.*

☞ A great variety of opinions exist, of course, on the subject of the *proper objects*, on which the Agricultural Society should bestow its premiums. It is, we well know, the wish of the Trustees to form such a scale as will judiciously promote the most desirable improvements, and the Editor *solicits*, and will feel himself *much indebted* for hints with which he may be favoured by gentlemen well wishers of the Society and of agriculture.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Prices for some time have been nearly stationary, and the present state of the market devoid of interest:

First quality family flour, retail price, $7—Wharf, do. $5 12½ to 5 25—Howard street, $5 75 to 5 87½—White wheat, $1 10 to 1 20—Red do. $1 5 to 1 10—Corn, 36 cts.—Rye. 43 cents.—Hogs, $5 25 to $6—Whiskey 34 cents—Pork prime, per bbl. $11 50—do. mess, $15—Lard, 8 to 10 cts.—Turks Island salt, 75 cts.—St. Ubes, do. 62½ cts.—Ground allum do. 70 cts.—Fine do. 70 cts.—Sacks do. $3 25—Molasses, 30 to 35 cts.—Green coffee, 23 to 25—St. Domingo do. 20 to 22 cts.—Timothy seed $4—Orchard grass, $3—Herds do. $3—Red clover, do. $6—White do. $10—Millet do. $1—Mangel wurtzel per lb. $1 50—Ruta baga do. 70 cts.—Mutton, 5 to 6 cts.—Beef, 8 to 10—Veal, 8 to 10—Turkeys, $1 to 1 50—Geese, 50 cts.—Chickens, per doz. $2 50—Ducks, canvas backs, $2 to 2 50, per pair—Red heads, 75 cents to $1 25, do.—Pheasants, 50 cts.—Butter, best fresh, 31 to 37½ cts.—Eggs, per doz. 20 to 25 cts—Potatoes, 30 cts.—Turnips, 50 cts—Onions, 50 cts.—Corn meal, per cwt. $1 25—Buck wheat, do. $3 25.

TOBACCO continues dull of sale, except fine yellow, and of that very little in market—sales of 3 hhds. from St. Mary's county, have been made the last week, one at $11, and 2 do. at $20—2 hhds. from Anne Arundel county near Friendship, new crop, raised by Mr. Francis Whitington, sold at $15, and seconds at $6.—Sales of good red, have been made at $5 to $8—do. dark, $2 to $4.

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AGRICULTURE.

TO THE EDITOR OF THE AMERICAN FARMER.

Letter I.

Dear Sir,

In all which you say in a late paper, relative to the appointment of Gen. S. Van Ransellaer "to preside on the Committee of Agriculture," I entirely agree with you. I also concur most heartily in every remark which you make, in regard to the necessity which the agriculturists ought to feel of guarding, as far as they can, their rights and interests from injury. But I fear you have given up the whole argument in your comments upon that part of the President's Message, recommending legislative encouragement to domestic manufactures. With due submission, that worthy magistrate has therein run counter to some of the most important doctrines of the political school in which he was nurtured, and to which he has always professed himself strongly attached. The disciples of that school have never admitted, nor can admit, this to be a question of expediency—farther than it may *incidentally* become such. For it is, (if ever one was, or can be,) as much a question of *right*, as any that can occur under our constitution. And so I think, I shall here after prove, that even the sagacious Hamilton, (whose name has been so often and so much abused on this subject) ever considered it; but especially in his celebrated Report, which is continually quoted by certain men in support of the contrary doctrine. That the manufacturers, or any other class, would be materially benefitted if they could prevail on Congress to legislate into their pockets, the whole property of the agriculturists, or even a moiety of it, I shall not be the man to deny. But I would humbly ask, whence they derive any such power? That it can not be from the clause which authorises them "to regulate commerce," is too plain to need more than a single remark: for if they did get it there, then to regulate, and to destroy are convertible terms. This would be such an abuse of language, that nothing short of the Devil's own impudence could possibly contend for it. That it can not be deduced from the taxing power in the clause relating to imposts, seems equally clear. For unless this power is limited to the sole purpose of *raising Revenue* for general and national objects, the prohibitory clause, forbidding *the taxation of exports* would be worse than a dead letter: it would be insult and mockery to the whole agricultural people of the United States, who have vainly, and foolishly thought themselves secured by this plain sanction from all partial taxes imposed to benefit local interests. Yet this identical purpose can be just as effectually accomplished by taxing *Imports* as *Exports*: since the moment Congress shall go beyond the object of Revenue, there is no stopping place, but their own discretion; which, however great it may be, or has been, is not such a reliance as the good people of this country have ever yet discovered a willingness entirely to depend upon for any important and essential right. It is vain and preposterous to attempt to gloss the thing over by the imposing phrases of "encouraging manufactures," and "protecting national industry;" together with all the other mummery of the same coinage and stamp. The plain English, stript of all disguise, is, that the agricultural class *may*, and *must* be taxed *ad libitum*, for the sole benefit of the manufacturing class, in regard to all articles of consumption which the latter chuse to make, or to attempt; and this too, by such a forced implication as has no parallel but in Swift's admirable satire called "A Tale of a Tub," wherein a power picked out "totidem literis"—(in so many letters) is pronounced full as good as one expressed with all the possible clearness that language could give. None would have the hardihood to assert that such a transfer of property could *directly* be made from one class to another; and yet if the same transfer can be effected *by indirect means*, what becomes of the security against the *direct mode*; or rather of what manner of use is it? Any tax upon imports, beyond what is required for national revenue, which enables the domestic manufacturer to make and to sell, what he could not before do, and to say to the agriculturist, "this, or nothing," *is this indirect transfer* to all intents and purposes: nor can all the sophists in the world make any thing else of it. The interminable arithmetical calculations, therefore, under which our news-papers have so long groaned,—proving how much money our manufacturers could make, if Congress would only pass as many laws in their favour, as they wish; serve no other purpose than to make a discovery which has about as much claim to novelty, as to justice; and is nothing more than a different version of the old game, "cross I win, and pile you lose." As to the other class of calculations going to show how many have been ruined by establishing certain manufactories dictated by their own fancies, *what do they prove?* Why simply, that the present state of things here, will not prevent improvidence, and want of skill from suffering what—since the creation of the world to the present day, they *have always*, and *ever must* unavoidably suffer in every country in the world. If *this plea* would authorise congressional interference, I could adduce thousands of instances, wherein men have purchased and set up *farms* as well as *manufactures*, without due consideration, and been ruined by it; yet not a word has ever been whispered, about Congress doing something *to encourage them*. What then would the additional duty gentlemen be at? Are all sorts of chimerical projects—provided only, that you call them "efforts of national industry," and "protection to domestic manufactures"—to be forced into successful operation by a legislative fiat, and at the expense of agriculture? Gentlemen will have the modesty, perhaps, to say no;—we only want a few of cotton, and wool, and hemp, and flax, and iron, and tallow! and God knows how many more,—for without the catalogue I have no chance to recollect them. And what then? Why we will most charitably and magnanimously, let you alone,—until some more projectors cry out;—"we have now a fine scheme, spic and span new, for making us all independent of foreign nations, which we have been hatching for some time; and all we now want is, that you routers and farmers would not only act as men-midwives for us, but pay *us*, instead of our paying *you*, for the accouchment."

I confess, Mr. Editor, that I lose all patience at such shallow pretexts for what looks to me like downright robbery, under the colour of law. Indeed, I would a thousand times prefer that a man should at once clap a pistol to my breast, and say;—"give up your money, or die," to this insulting my understanding, at the same time that he demands my consent to a legislative enactment by which I, and all my agricultural brethren are taxed for his benefit, as long as we live.

Suppose that too many of us *have* foolishly devoted ourselves to tilling the earth for a livelihood; and that we *do* make "too much bread stuff,—too much cotton,—and too much tobacco," as one of your correspondents (who seems to know every man's business better than the man himself) tells us. Will it not suffice, that we suffer the usual consequences of such folly,—the only natural and legitimate cure for which is,—the suffering itself. Who appointed congress the guardians of our private concerns, or the judges of the occupations we should follow? And yet they must have a right to act in both capacities, or the discovery of your correspondent will avail very little towards a remedy for such self destructive stupidity, as he seems to think the making a superabundance of the necessaries and luxuries of life. On this point, I believe myself lawyer enough to say positively, that the constitution is entirely silent. And unless silence in this case gives *power*, as well as it is said in some others, to give *consent*, our follies with all their consequences, great and small, must rest upon our own heads: for strange to say, the wise framers of that instrument have most thoughtlessly neglected to make any provision for limiting the quantity of products which the individuals of any trade, profession, or calling might make, by giving full scope to their industry and skill. Yet if this suggestion of your correspondent means any thing, it must mean that congress either has, or should have some such power; or our agricultural citizens will be eternally in danger of committing some such blunder in political economy. Alas! what a pity it is that after all his vilifying, tutoring, and coaxing, we agriculturists should still be such stupid and hardened hereticks as to be unable to see any thing in all which he has said, done, and written, but a very clumsy, and ill-disguised scheme, to make agriculture, through the instrumentality of congress, underwrite and bear harmless every manufacturing scheme—be it what it may, which either has been, or may be undertaken by any body, in any part of the United States.

Under *our* construction of the instrument which secures our rights, and guards our interests from all hostile attempts, either foreign or domestic, *all men are free to pursue their own private concerns in their own way*; nor can the ingenuity, nor incision of man, by any possible distortion of its provisions, that a person in his senses would make, prove that our legislators can interfere to disturb or take away this privilege. If all the various classes in the community are thus free, either to adopt or to abandon any particular means which they either collectively, or individually may deem best calculated to promote their own private interest, (and nothing appears to the contrary,) then is it as clear as the light of day, that Congress can have no manner of right, either express, or implied, to abridge or destroy this freedom of choice. It is a perfect waste of time and paper, therefore, to be overspreading the country, with pamphlet after pamphlet, and papers of all sizes, shapes, and kinds, proving that manufacturers could put more money into their pockets, if they could only get more taxes in their favour. No body has denied, or will deny it: all that we agriculturists ask, is, *to see a demonstration of the right to impose such taxes*. Until that is done, we do not consider ourselves bound even to listen to one word that is said, farther than to make our cheeks sound "*buck*,"[*] to it. Shall *we* be told, "*that it is our best plan to make money too, to give higher prices for domestic, than for foreign manufac-*

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[*] *See the 10th chapter of the history of John Ball, in which Nic Frog gives this reply to something which John said to him.*

tures:" or what amounts to the same thing; "*that it is a very ruinous business to buy cheap, if we purchase from other nations.*" We think it a sufficient reply to all such officious dictation, that we believe we understand our own interest, at least as well as our would-be guardians: and whether we do or not, that we have a clear and undisputed right to determine for ourselves in all imaginable matters, relating to our private concerns and pursuits; provided, that in so doing, we interfere with no other mens equally free choice, in regard to similar objects.

This is the great, the all important point first to be decided between the petitioners for increased duties, and their opponents. *We* make one general reply to all their numberless arithmetical statements, which is, *that any increase of imposts whatever, other than for the increase of national revenue, is unjust, impolitick, and unconstitutional.*——*Unjust*, because it injures some classes to benefit others; *impolitick*, because national comfort, wealth, and strength, are best promoted by free trade; and lastly and above all, *unconstitutional*, because it would evade, and render utterly nugatory, all our checks against partial taxation.

Your constant reader and friend,
RURIS CONSULTUS.

December 26, 1823.

TANNIN AND TANNING.

*The following extracts are taken from "*Ure's Dictionary of Chemistry.*"*

TANNIN. This, which is one of the immediate principles of vegetables, was first distinguished by Seguin from the gallic acid, with which it had been confounded under the name of the *astringent principle*. He gave it the name of tannin, from its use in the tanning of leather; which it effects by its characteristic property, that of forming with gelatin a tough insoluble matter.

It may be obtained from vegetables by macerating them in cold water; and precipitated from this solution, which contains likewise gallic acid and extractive matter, by hyperoxygenized muriate of tin. From this precipitate, immediately diffused in a large quantity of water, the oxide of tin may be separated by sulphuretted hydrogen gas, leaving the tannin in solution.

Professor Proust has since recommended another method, the precipitation of a decoction of galls by powdered carbonate of potash, washing well the greenish grey flakes that fall down with cold water, and drying them in a stove. The precipitate grows brown in the air, becomes brittle and shining like a resin, and yet remains soluble in hot water. The tannin in this state, he says, is very pure.

Sir H. Davy, after making several experiments on different methods of ascertaining the quantity of tannin in astringent infusions, prefers for this purpose the common process of precipitating the tannin by gelatin; but he remarks, that the tannin of different vegetables requires different proportions of gelatin for its saturation; and that the quantity of precipitate obtained is influenced by the degree in which the solutions are concentrated.

M. Chenevix observed, that coffee berries acquired by roasting the property of precipitating gelatin; and Mr. Hatchett has made a number of experiments, which show that an artificial tannin, or substance having its chief property, may be formed, by treating with nitric acid matters containg charcoal. It is remarkable that this tannin, when prepared from vegetable substances, as dry charcoal of wood, yields, on combustion, products analogous to those of animal matters.—From his experiments it would seem, that tannin is, in reality, carbonaceous matter combined with oxygen; and the difference in the proportion of oxygen may occasion the differences in the tannin procured from different substances, that from catechu appearing to contain most.

Bouillon Lagrange asserts, that tannin by absorbing oxygen is converted into gallic acid.

It is not an unfrequent practice, to administer medicines containing tannin in cases of debility, and at the same time to prescribe gelatinous food as nutricious. But this is evidently improper, as the tannin, from its chemical properties, must render the gelatin indigestible. For the chief use of tannin, see the following article.

According to Berzelius, tannin consists of hydrogen 4.186 + carbon 51.160 + oxygen 44.654. And the tannate of lead is composed of,

Tannin,	100	26.923
Oxide of lead,	52	14.

But there is much uncertainty concerning the definite neutrality of this compound.

TANNING. The several kinds of leather are prepared from the skins of animals macerated for a long time with lime and water, to promote the separation of the hair and wool, and of the fat and fleshy parts, in which recourse is also had to the assistance of mechanical pressure, scraping and the like. The skin, when thus deprived of its more putrescible part, and brought, considerably toward the state of mere fibre, is tanned by maceration with certain astringent substances, particularly the bark of the oak-tree.

The hide consists almost wholly of gelatin, and all that is necessary is, to divest it of the hair, epidermis, and any flesh or fat adhering to it.—This is commonly done, after they have been soaked in water some time, and handled or trodden to cleanse them from filth, by immersing them in milk of lime. Some, instead of lime, use an acescent infusion of barley or rye meal, or spent tan; and others recommend water acidulated with sulphuric acid. Similar acidulous waters are afterward employed for raising or swelling the hide, when this is necessary.

The skins, thus prepared, are finally to undergo what is properly called the tanning. This is usually done by throwing into a pit, or cistern made in the ground, a quantity of ground oak-bark, that has already been used, and on this the skins and fresh bark in alternate layers, covering the whole with half a foot of tan, and treading it well down. The tanning may be accelerated by adding a little water.

As it is a long time before the hide is thoroughly tanned in this mode, at least many months, during which the bark is renewed three or four times; M. Seguin steeps the skins in a strong infusion of tan, and assists its action by heat.—Chaptal observes, however, that this requires an extensive apparatus for preparing the liquor and the skins: the leather imbibes so much water, that it remains spongy a long time, and wrinkles in drying; and it is extremely difficult so to arrange the hides in a copper, as to keep them apart from each other, and free of the sides of the vessel.

The following account of M. Seguin's practice, was transmitted to England in the year 1796:—

To tan a skin is to take away its putrescent quality, preserving, however, a certain degree of pliability. This is effected by incorporating with the skin particles of a substance which destroys their tendency to putrefaction.

The operations relating to tanning are therefore of two kinds:—the first is merely depriving the skin of those parts which would oppose its preservation, or which adhere to it but little, such as hair and flesh; the other consists in incorporating with it a substance, which shall prevent its putrifying.

The operation of the first kind are technically termed, unhairing and fleshing; the operations of the second kind belong to tanning, properly so called.

Fleshing is an operation merely mechanical: unhairing is a mechanical operation if performed by shaving; or a chemical operation, if effected by dissolution or decomposition of the substance which connects the hair with the skin.

According to the ancient method, the dissolution of this substance was effected by means of lime; the decomposition either by the vinous fermentation of barley, by the acetous fermentation of oak bark, or by the putrid fermentation produced by piling the hides one upon another.

Unhairing by means of lime would often take twelve or fifteen months; this operation with barley, or the acetous part of tan, could not be performed in less than two months.

The slowness of these operations, which the experiments of Seguin have shown, may be finished in a few days, and in a more advantageous manner, by means of the same substances, proves that the nature of those operations was not understood by those who performed them. Those of tanning, properly so called, were as little known, as the details we are about giving will prove, which we compare with the least improved routine now in practice.

Whatever the method of unhairing was, the mode of tanning was always the same, for skins unhaired with lime, or those prepared with barley or tan.

This mode of operating would take eighteen months or two years, often three years, when it was wished to tan the hides thoroughly.

Among the substances for tanning, gallnut, sumach, and the bark of oak, to which may be added catechu, appear the most proper, at least in the present state of our knowledge. In the middle departments of France, oak-bark is preferred, because it is the cheapest and most abundant substance. To use it, it is first ground to powder; then, according to the old mode, it is put into large holes dug in the ground, which are filled by alternate layers of ground bark and unhaired hides

As the principle which effects the tanning cannot act in the interior of the skin, unless carried in by some liquid in which it is first dissolved, tanning is not produced by the immediate action of the powdered bark upon the skin, but only by the action of the dissolution of the tanning principle originally contained in the bark. The tan therefore has the tanning property only when wetted so much as not to absorb all the water thrown on it. But as tanners put in their vats only a small portion of water compared to what would be necessary to deprive the bark of all the tanning principle which it contains, the bark put into the vats preserves, when taken out, a portion of its tanning principle

This waste is not the only disadvantage of the old modes of proceeding; they are, besides, liable never to produce in the skins a complete saturation with the tanning principle. For, as the property of attraction is common to all bodies, according to the different degree of saturation, the water containing in solution a certain quantity of the tanning principle, will not part, to a fixed weight of skins, with as much as the same quantity of water will, in which a greater quantity of the principle is dissolved.

As the water which, in the old manner of proceeding, is in the vats, can contain but a small portion of the tanning principle, owing to the nature of the operation, it can give but a small portion of it to the skin, and even this it parts with by slow degrees. Hence, the slowness in the tanning of skins according to the old method, which required two whole years, and sometimes three, before a skin was well tanned to the centre. Hence also, the imperfection of skins tanned by that method; an imperfection resulting from the non-saturation of the tanning principle, even when it had penetrated the centre.

The important desideratum was, therefore, to get together, within a small compass, the tanning principle, to increase its action, and produce in the hide a complete saturation in a much shorter time than that necessary for the incomplete tanning produced in vats. But, first of all, it was necessary to analyze the skin, analyze the leather, and analyze the oak-bark. The principles of these three substances were to be insulated, and their action upon one another determined, the influence of their combination upon that action known, and the circumstances most productive of its greatest action found out.

Seguin, by following this method, has determined:

1. That the skin deprived of flesh and hair, is a substance which can easily, by a proper process, be entirely converted into an animal jelly (glue.)

2. That a solution of this last mentioned substance, mixed with a solution of tan, forms immediately an imputrescible and indissoluble compound.

3. That the solution of tan is composed of two very distinct substances; one of which precipitates the solution of glue, and which is the true tanning substance; the other, which precipitates sulphate of iron, without precipitating the solution of glue, and which produces only the necessary disoxygenation of the skin, and of the substance which connects the hair to the skin.

4. That the operation of tanning is not a simple combination of the skin with the principle which precipitates the glue, but a combination of that principle with the skin disoxygenized by the substance, which in the dissolution of tan is found to precipitate the sulphate of iron; so that every substance proper for tanning should possess the properties of precipitating the solution of glue, and of precipitating the sulphate of iron.

5. That the operation of tanning consists in swelling the skins by means of an acidulous principle; to disoxygenize, by means of the principle which in the solution of bark precipitates the solution of sulphate of iron, that substance which connects the hair to the skin, and thus produce an easy unhairing; to disoxygenize the skin by means of the same principle, and to bring it by this disoxygenation to the middle state between glue and skin; and then to combine with it, after this disoxygenation, and while it is in this middle state, that particular substance in oak-bark, as well as in many other vegetables, which is found to precipitate the solution of glue, and which is not, as has been hitherto conceived, an astringent substance.

Agreeably to these discoveries, there only remains, in order to tan speedily and completely, to condense the tanning principle so as to accelerate its action. Seguin, to effect this, follows a very simple process. He pours water upon the powdered tan, contained in an apparatus nearly similar to that made use of in saltpetre works.—This water, by going through the tan, takes from it a portion of its tanning principle, and by successive filtrations dissolves every time an additional quantity of it, till at last the bark rather tends to deprive it of some than to give up more. Seguin succeeds in bringing these solutions to such a degree of strength, that, he says, he can, by taking proper measure, tan calf-skin in 24 hours, and the strongest ox-hides in seven or eight days. These solutions containing a great quantity of the tanning principle, impart to the skin as much of it as it can absorb, so that it can then easily attain a complete saturation of the principle, and produce leather of a quality much superior to that of most countries famous for their leather.

On the above I have only to remark, that every new art or considerable improvement must unavoidably be attended with many difficulties in the establishment of a manufactory in the large way. From private inquiry I find, that this also has its difficulties, which have hitherto prevented its being carried into full effect in this country. Of what nature these may be I am not decidedly informed, and mention them in this place only to prevent manufacturers from engaging in an undertaking of this kind, without cautious inquiry.

M. Desmond has recommended, to saturate water with tannin, by affusion on successive portions of oak-bark, or whatever may be used; and when the bark will give out no more tannin, to extract what gallic acid still remains in it, by pouring on fresh water. To the latter, or acidulous liquor, he adds one-thousandth part by measure of sulphuric acid; and in this steeps the hide, till the hair will come off easily by scraping. When raising is necessary, he steeps the hide ten or twelve hours in water acidulated with a five-hundredth part by measure of sulphuric acid; after which they are to be washed repeatedly, and scraped with the round knife. Lastly, the hides are to be steeped some hours in a weak solution of tannin, then a few days in a stronger, and this must be renewed as the tannin is exhausted, till the leather is fully tanned.

For the softer skins, as calves, goats, &c. he does not use the acid mixture, but milk of lime.

Of substances used for tanning Sir H. Davy observes, that 1 lb. of catechu is nearly equal to 2¼ of galls, 3 of sumach, 7½ of the bark of the Leicester willow, 8½ of oak-bark, 11 of the bark of the Spanish chesnut, 18 of elm-bark, and 21 of common willow-bark, with respect to the tannin contained in them. He observes too, that leather slowly tanned in weak infusions of barks appears to be better in quality, being both softer and stronger than when tanned by strong infusions; and he ascribes this to the extractive matter they imbibe. This principle, therefore, affects the quality of the material employed in tanning; and galls, which contain a great deal of tannin, make a hard leather, and liable to crack, from their deficiency of extractive matter.—*Ann. de Chim. et de Phys.—Philos. Trans.—Philos. Mag.—Chaptal's Chem.*

FOR THE AMERICAN FARMER.

THE SESAMUM INDICUM, OR BENE PLANT.

Mr. Skinner,

Sir—The Bene plant, or *Sesamum Indicum* is a tender annual plant, that is easily injured by the frost, and requires a warm climate to bring its seed to maturity. The plants grow erect, stems from three to six feet high, with numerous branches, bearing their seed in small square capsules. The seed should be planted as early in the spring as it is usual to sow the seed of other tender annual plants.

One leaf of the Bene plant, immersed in a tumbler of pure water, changes the whole of it immediately, into a perfect mucilage; that is clear, tasteless, and inodorous. Sick children take this mucilage with the same avidity they would drink cold water—and as it is perfectly innocent, they may be allowed to take as much of it as they like.

The Bene mucilage is useful in all cases where other mild and mucilaginous remedies are proper to be recommended. It is particularly useful in the dysentery and summer complaints of children; and the leaves may be applied in cases of inflammation of the eyes, and as a dressing for burns, blisters, &c. There is no provident family, that knew the value of the Bene plant, I believe, who would ever neglect planting a few of these seed every spring, in some border of the garden, to have fresh leaves, always at hand in case of need, during the summer season. Although the sessamum requires a warm climate to bring its seed to maturity, it will grow well enough in any part of the United States to furnish its mucilage, during the whole of the season it is most generally wanted.

The greatest quantity of this mucilage is obtained from the youngest leaves; and it is best when made from them while green, just as they are pulled from the plants. These leaves, however, may be gathered at any time during the summer, and if carefully dried, they will serve to afford mucilage until green leaves may be had again.

The sessamum is one of the most invaluable plants I know. I do not mean to say, however, that such entire dependance ought to be placed on this or any other remedy, as to neglect such other means as have been heretofore found useful. In all cases of dysentery and colera infantum (both of which are diseases of great danger) the advice of a skilful physician should always be obtained when practicable. But I may safely assert, that if the virtues of the Bene leaves were known as generally as they should be, they would save the good people of the United States many thousand dollars annually, that are now spent to procure nauseous drugs of various kinds, that are not only useless, but often injurious to those who take them.

In August last, a boy six or eight years old, was severely afflicted with a bowel complaint, following the meazles; and for two weeks he had tried various remedies, that had been prescribed for him, but with little advantage. For the last six hours, before I was called on to visit him he had sat almost constantly on the stool, passing small quantities of bloody and slimy matter; and crying with the pain and griping of his bowels. I made him a warm infusion of the Bene leaf, and let him drink as freely as he would. In less than half an hour his pain ceased, and he fell asleep, and was not disturbed for eight hours afterwards. On the next day, when I visited him, I found him complaining again, of a return of his pain, and frequent and ineffectual calls to the pot. I again administered the Bene mucilage, without any other medicine; and advised his persisting steadily in the use of it. He followed my directions, and was perfectly restored to his health by this remedy, in the course of a few days.

A child, aged about ten months, was seen by me in July last, having high fever, and great thirst, bowels griped, with passages slimy and mixed with blood. I put one of the green leaves of the Bene plant into a small tumbler full of spring water, and offered it to drink; but the infant turned from it with disgust, crying through fear of its being forced to swallow another dose of such physic as its mother had been giving to it. I removed the tumbler, therefore, immediately, out of its view, and took the leaf out of it. The clear Bene mucilage was then presented to the child, and it drank of it with avidity, holding fast to the tumbler until its thirst was satisfied. This pleasant drink was repeated as often as the child would take it, and it was restored, thereby, to its perfect health in two or three days.

There was no resort to any medicine, in either of the above cases, after the Bene mucilage was given. Caster oil had been previously administered, and various other means had been used, but nothing that had been tried, seemed to be of any great use until this *new remedy* was resorted to. It is evident, therefore, that much good may be done with it; and I hope many persons will be prevailed on to sow the seed next spring; that a more full and fair trial may be given to this mucilage. On the first of September last, I was attacked myself, in the morning, with an inflammation in my right eye, During the whole day I was in constant pain, and as the evening approached the irritation increased to such a degree that I was obliged to retire from the light. I prepared some of the Bene mucilage with *warm* water; and applying it directly to my eye, I derived immediately, much greater relief from it than I had anticipated. I next took the leaves out of the warm water, and applied them to my eye. They were exceedingly soft, smooth, and comfortable; and procured me a good night's rest; and in the morning I found myself entirely free from any appearance of the inflammation that attacked me.

But independent of the uses of the Bene leaf, as above, the *Bene seed*, are invalvuble on account of the oil they afford. Two gallons of the seed will yield, it is said, one gallon of oil, equal in every respect, if not superior to olive oil. Their seed are also good as food for man and beast. To obtain a crop for general purposes of this kind—the seed should be planted, I presume, like cotton, in rows, wide enough apart to admit of cultivation with the plough.

I fear, sir, my letter may have become as tedious as it is lengthy, I shall conclude it, therefore, immediately, observing only, that I have a plentiful supply of the true* Bene seed, just received from South Carolina; and it will afford me great pleasure to furnish them to any person who may want them. I intend to keep a regular supply of these seed for distribution annually, so that those of our good people who live in latitudes, where the Bene plant will not come to perfect maturity, may, notwithstanding, be provided with them always. The Bene seed are so very small, that half a thimble full of them will produce as many plants as any family will want for medicinal purposes. *No charge* will be made by me, at any time, for these seed; but as I am under the necessity of refusing all letters on which the postage is not paid, I must apprise your readers of this to prevent disappointments.

I am, very respectfully,
Your friend,
And ob't serv't,

JAMES SMITH.

Vaccine Institution, Baltimore,
December 25th, 1823.

TO THE EDITOR OF THE AMERICAN FARMER.

CHEAT—AGAIN.

DEAR SIR,

A great deal has, of late, been written to very little purpose, on the subject of cheat. From actual experiment, I have found that wheat perfectly clear of cheat when sowed, will occasionally be filled with it at harvest; should the season have been unfavourable, the land badly prepared, or the wheat crippled by the operation of the fly. Could the point in dispute be decided at once, satisfactorily to every one, it would be of no advantage whatever, as we already know enough to enable us to avoid the deprecated evil, as far as is consistent with human means. Sow clean wheat, cultivate the land well, and ameliorate the soil, to the utmost practicable limit. If we are then pestered with cheat, no blame can be attached to us—we will have done our duty. But sow wheat mixed with cheat, cockle, and onions, and my word for it, you will be paid in kind. In one case the crop *may possibly* be infested with cheat; in the other the thing is absolutely certain—but worse than this, the wheat will continue to become much more foul every year. Much more heat and moisture are requisite for the germination of cheat and cockle, than wheat, they will, therefore, frequently remain in and on the ground perfectly sound, when wheat would have *come up*; consequently, the earth will, in the course of time, become filled with the germinating principles of these plants, exactly as it is with those of many other noxious weeds—with onions, thistles, docks, &c. The farmer, after sowing a crop in *first rate style*, is frequently much surprised to find at harvest many intruders, not reflecting at all upon the prolific cause of his disappointed hopes. Those persons who oppose the opinion that wheat produces cheat, do it upon this ground, that cheat in that event must be a mule plant, and could not, of course, reproduce itself, which it is well known, it does. This may be accounted for upon the supposition that wheat is a *species* of the genus, of which cheat stands at the head. In other words, that wheat is only improved cheat; to believe which, requires no greater stretch of fancy, than the acknowledgment of a fact, very generally known, that the finest apples we now have, are the improved progeny of the original crab.

Very respectfully,
R. B. BUCKNER.

Vint-Hill, July 28th, 1823.

ON THE CONSTRUCTION OF ICE HOUSES AND STOWING AWAY OF ICE.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir—Having observed in a late number of the American Farmer, some remarks upon the convenience and utility of securing a plentiful supply of ice, for use through the summer season, I take the liberty to add a few observations upon the subject, which if you think useful, you are at liberty to insert in your valuable journal.

As it would neither be convenient to myself, nor beneficial to the object we have in view, to enter upon an extended discussion of this subject, I shall at once proceed to remark, that the common manner pursued, by almost every one in putting up ice, is to throw it promiscuously into the house, and then employ labourers, to break it into small pieces. In this manner of securing it, numberless interstices are formed by the angles of the pieces after they are broken, which being filled with air, operate of course through the season, to promote the decay of the ice, and greatly accelerate its dissolution.

The manner which I have pursued, and which I strongly recommend to the observance of your readers is, to cut the ice as nearly into squares as can conveniently be done, and when conveyed to the house, lay these down carefully, in regular layers, taking care to break them as little as possible. As soon as the first layer or stratum is completed, fill up with fine ice all the crevices, which the angles in the pieces may have occasioned, then sweep the surface clean, from all small fragments of ice, so as to leave a smooth clear floor or surface, to commence your succeeding stratum or layer upon; and thus proceed, until the house shall have been completely filled. In this manner, I have found that one-third more ice, can be stowed in a given space, than could be put into it by the ordinary mode of pounding; and as there will not be the smallest crevice throughout the whole mass, if the plan here recommended is properly executed, it is confidently asserted that the ice will last *double as long* as under the common mode of securing it.

Every ice house should be provided with a drain to carry off the drippings, throughout the warm season, unless the bottom be an open porous, sandy soil; as nothing is so fatal to ice as moisture. This drain should be so constructed as not to admit air, else a constant current of warm atmosphere will be drawn to the bottom of the ice, which will rapidly destroy it. The house which the writer of these remarks has erected, is of the most simple construction, and a similar one may be built by any farmer, for an expense not exceeding $30. It has been filled in the manner here recommended, and has not been without ice since it was first stocked, and at this time, contains a considerable quantity, notwithstanding the most profuse use was made of it, by two families during the whole of last summer.

The following plan is recommended in the construction of ice houses. Dig a pit on the N. or N. W. side of a bank or hill, 18 feet square, and about 14 feet deep on the upper side, to which depth, the pit may be raised all round by the dirt, being thrown to the lower side; build in this pit a house of white oak logs, so as to leave a clear space between the outsides of the house, and the wall of the pit, of about 2 feet—if the bank is of hard clay, it will need no stay; if it be not of clay, or hard firm soil, it must be stayed by pieces of plank, propped against it from the outsides of the logs, so as to prevent its covering the space between the logs; and this bank should be filled all round with straw, and the insides of the logs boarded up, so as to present a smooth even surface, this will leave the inside of the house about 12 or 13 feet square, which will be sufficient for any family.

The drain from the bottom of the house should be placed on the lowest side, to which a sufficient fall ought to be secured from all parts of the foundation. The drain should be formed by stone, so laid, as to afford an opening, for the water readily to pass off, and then covered up with earth, taking care to allow to it a sufficient fall, and then its termination be covered slightly with earth, so that no air can pass up, whilst the moisture may gradually soak through. Lay at the bottom of the house sleepers, so as tu raise the planks to be placed upon them, about one foot from the ground, and upon these planks lay your first strata of ice, as is here before directed.

After raising your house with logs, as here recommended, to the height of about 14 feet, build another house over it, with logs to be placed upon the surface of the ground at the outer edge of the pit, raise this house about three feet high, upon which place your roof, and from the inner logs, which inclose the ice to the outer ones, which support the roof, nail planks, and stow the whole space under them with straw; you will thus have an ice house surrounded on all sides with a thickness of about two feet of straw. When the ice is put away, cover the whole with a suitable thickness of straw, which should be removed once or twice, in the course of the summer, as it becomes wet, and replace it with a fresh dry covering.—By pursuing these means, you need never be without a plentiful supply of ice at all seasons.

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* *There are five species of the Sesamum, viz:* 1*st*. S. orientale, *common Sesamum, or oily grain.* 2*d*. S. luteum, *yellow flowered Sesamum.* 3*d*. *S. indicum, or* Bene Plant. 4*th*. S. laciniatum, *jagged Sesamum.* 5*th*. S. Prostratum. *Dwarf honey Sesamum.*

See Rees' Cyclopedia.

P. E. T.

TO THE EDITOR OF THE AMERICAN FARMER.

GLANDERS IN HORSES.

Downingtown, 12*mo.* 19*th*, 1823.

Esteemed Friend,

I have noticed in the last Farmer, a proposal to send thy subscribers one half sheet with advertisements, and an almanack in the fall; which I think I may be safe in saying, will be a gratuitous addition to all those who estimate the present value of thy paper properly.

I have also noticed a request made by Robert Lowry, in the last Farmer, for information respecting the glanders; to whom I feel willing to give my small experience, or do any thing in my power for the preservation of so useful an animal.

I have in all the cases that have come within my knowledge, uniformly traced them back to what is here termed the distemper; that is, the first stages of the disease, are in my opinion, what is called the distemper, and by some the strangles.

I consider the glanders to be a neglected or violent case of the distemper: from a repeated discharge from the nose, and constant inflammation, the glands become ulcerated, and finally the smaller bones of the nose become carious, and of course incurable, as they are not so situated, as to admit of an operation being performed on them; in this stage the horse has been inoculated, mercury has been tried, and both without success.

But take the distemper, or strangles, in time, cure it effectually and you prevent the glanders.

SYMPTOMS.

The first thing discovered is a rattling in the throat, with dulness of countenance, apparent drowsiness, and some fever, then a swelling in the throat and between the jaws, a discharge at the nose, and sometimes cough; if the horse does not die by the swelling at his throat, it becomes what is called glanders.

CURE.

Dissolve one pound of glauber salts in warm water, set it in a bucket in his manger, and he will drink it; take half a gallon of blood from his neck vein; give a mash of two quarts of wheat bran scalded with sassafrass tea, after which offer him lukewarm water to drink, and do not suffer him to drink any other kind for that day, next morning take the same quantity of blood as before, give a mash as before, with the addition of half an ounce of salt petre dissolved in it, let his food be wet, and of a weak kind—a run at grass after the first two days would be of service.

If thee thinks this prevention better than a cure, thee may give it a place in thy paper.

Respectfully thine,
JOSEPH KERSEY.

MAGOTHY BAY BEAN, OR PARTRIDGE PEA.

Wake Forest, *September* 21, 1823.

Dear Sir,

In an account of the Accomack pea, which I mentioned to you in a former letter, I will refer you to page 273, vol. 6th, of the Medical Repository, published in the year 1803. On a perusal of the article, I attach great importance to it, and as it is well written, would recommend it to a place in the American Farmer. The account is in a letter from Mr. John Dennis, then a member of Congress from the eastern shore of Virginia, to Dr. Mitchell. Colonel Allen Rogers of this vicinity, was lately in Northampton, and yesterday assured me that the pea still maintained the reputation there, which it had when Mr. Dennis wrote, 20 years ago.

Very respectfully,
CALVIN JONES.

John S. Skinner, Esq.

From the 6th vol. of the New York Medical Repository.

An account of a plant called the Magothy bay bean, or Accomack pea, cultivated for fertilizing lands: In a letter to Doctor Mitchell, from the Hon. John Dennis, Representative in Congress from Maryland, dated Washington city, December 10, 1802:—

In conformity with your request, you will find herein a brief description of the Northampton bean, sometimes called the Accomack pea, alias the Magothy bay bean, with an imperfect sketch of some of its principal properties and uses.

The above mentioned bean or pea, is a plant of annual growth, varying from eighteen inches to three and a half feet in height, according to the fertility of the soil. It grows in almost every kind of soil, however poor by nature, or impoverished by an exhausting cultivation; though it succeeds best in a light, loose land, and does worst in hard binding clay. It has a small tap root, and a few inconsiderable lateral roots, with a wide spreading top, covered closely with a foliage, and bearing a pod, with peas or beans therein contained, strongly resembling the leaf, pod and pea of the locust tree. It has, therefore, been denominated, by some, a locust tree in miniature. This plant has the singular property of expanding its foilage in the day and contracting it in the night, thereby admitting the passage of the dews to the earth, and of excluding therefrom the rays of the sun. To this cause has been very much attributed, its supposed efficacy in the amelioration of the soil.

The modes of propagating and perpetuating it are various, but those generally in use, and most approved, are the two following, viz. to sow with oats, or other small grain, in the spring, from a pint to a quart of the pea or bean to the acre, or you may sow it on the ground newly ploughed by itself. If the land be of a light, loose quality, you may sow the above quantity on wheat, or on the land unploughed; but if the soil be stiff and binding, it is necessary to plough it. As it is sometimes injured by the autumnal frosts, and never sprouts until late in April or the first of May, it may be desirable in your northern latitudes, to sow it as early as possible; and where it is sown on wheat, or by itself, on account of the length of time for which it lies on the earth before it germinates, it may be scattered over the ground in February or March.—The other method most approved, and that which is the most economical, with regard to seed, is to plant two or three of the peas or beans in the hill with Indian corn, common peas or beans, and suffer it to grow and ripen with the same, which it will do without any injury thereto; and, from the multiplicity of seed it contains, and the elastic tendency, which it possesses in the bursting of its pods, it will spontaneously seed the earth, with as much or more regularity than it can be effected by any other mode. The shortness of your summers, and the liability of the pea to be injured by the frost, form the only objection to the latter mode in the state of New York, and therefore, perhaps, the other is to be preferred. When the earth is once replenished with the seed, it will perpetuate itself, provided that where the land be stiff, the ground be broken once every year, and where light, once in two years. I have usually planted the land in Indian corn, and seeded it in oats or other small grain, and cultivated it alternately in the one or other every year; and this is the most effectual and expeditious mode of introducing and of perpetuating it. The year the land is in corn, all the peas that sprout in the spring will be destroyed by cultivation; but there still remains in the earth a sufficient quantity to seed it, which will come up with wheat, oats, or other small grain, the succeeding spring, in great profusion; will grow and flourish with it; and will have attained a height, by the time of harvest, (which in Maryland, is in July,) that is sometimes, though not generally, in the way of the scythe.—As soon as the grain is removed, it progresses with great rapidity, and attains its growth some time in August—overshadows the land, suffocating and excluding all other weeds and grass. It now puts forth a yellow blossom, which (particularly in our large plantations,) causes the field to exhibit a most beautiful appearance for a few weeks, and ripens in the month of October, affording to the bees, in its bloom, delicious sustenance, and to the sportsman, in its maturity, delightful amusement, in the large number of quails which it attracts, and for which it furnishes a nutritious food, whilst it shelters them from the hawk. After the pea is ripe, we frequently open the enclosure to cattle and sheep, and other animals, and the cattle and hogs are fond of, and fatten on it; but carefully exclude cattle and sheep from it in its green state, since they speedily destroy it.

The principal use, however, to which it is applied, and for which it is the most prized, is its application as a manure, to which it contributes as well by its properties before-mentioned of expansion and contraction, to which may be added that of attraction, as by the great quantity of litter which it leaves on the earth. The spring succeeding its growth, we find it a little in the way of the plough, and the labourers frequently complain of it on that account; but after two or three ploughings, it dissolves, and mingles with the earth, and, by the middle of summer, is scarcely perceptible. It opens a close binding land, and fertilizes and adds to the soil wherever it grows; but if it will only leave the land as it found it, under the severe but profitable system of exhausting cultivation, of Indian corn one year, and small grain the next year succeeding, for twenty years together, we apprehend it is a great point gained with us, in our wornout lands, where other sources of manure are yet unattainable in sufficient quantities. In the county of Northampton, in Virginia, where this plant was first discovered to be useful, they have cultivated their lands every year, for twenty years last past, in Indian corn or oats, and find the land, without the aid of any thing but the pea, considerably improved. The ardent and impatient, who expect from it all the effects of a dung heap, will, however, be disappointed; and the husbandman who is contented to grow rich, and flourish by a slow and progressive system, will alone appreciate its merits, and continue its cultivation.

I have communicated all that I deem important on the subject, but will, with pleasure, answer any queries which you may think proper to suggest; and will refer you to the Hon. Mr. Stratton, who resides in the county in which this plant was first discovered, and where it is now in universal use, for a fuller account of its valuable properties.

FROM THE LONDON FARMERS' JOURNAL.

ON MERINO SHEEP.

(By C. C. WESTERN, Esq. M. P.)

Felix Hall, August 20, 1823.

SIR,

I am desirous, through the channel of your useful paper, to communicate to the public some remarks, the result of long experience and observation, upon the advantages to be expected from the encouragement of the Merino breed of sheep, and I trust you will give them a place when nothing more interesting happens to occur.

I have always declared my opinion to be, that the Merino sheep *want to be made;* as the Leicester and South-down have been. They required it, indeed, more than either, and I think *deserve* it better than either. If the same pains were bestowed upon them by men of the same superior intelligence as those who devoted themselves to the cultivation of the New Leicester, *the Merino would be the most valuable animal of the two.* It is impossible to open the fleece of a well bred and well fed Merino sheep, and not be struck with the extraordinary luxuriance, beauty, and value of the produce, and to avoid feeling at the same time, some degree of surprise and regret, that our most enlightened and intelligent breeders have hitherto neglected to bestow upon such an animal the full benefit of their science, skill, and attention. The experiments I have seen made upon them, have generally been rather of persecution, to try what hardships they could live under, (and which, by the by, they sustain in a manner I should have thought impossible, (or languid indifference of success, or even disinclination, lest they should attract for a time the favoritism attached to our established breeds. I do not myself wish they should supplant altogether an useful established breed, but I wish them to occupy a *full* share of our attention. I will go so far as to say, I think a PORTION of the Merino blood *may*, with advantage, be thrown into the flocks of all our *short*-woolled sheep, but it must be done with great judgment and care, in the selection of the male or female through which the blood is to be taken. The South-down flocks have for some years past reached the utmost point of perfection to which they can be brought without such aid, to improve *further* the quality of their wool. I am pretty sure the most enlightened South-down breeders will admit this position, and I am confident the Merino sheep may, in full purity of blood, be so improved as to give that cross without *much* detracting from the carcass. It may be done, through the *females*, which are much oftener (we all know) brought to perfect symmetry and shape than the males I think I can shew many ewes as perfect in their frame as any South-down ewe that ever was seen; not so the rams: it is still very rare to find one that will satisfy the eye, of a Leicester or South-down breeder; but even there great advances have been made; the offspring of a Merino ewe by a South-down ram might thus be used in preference to taking the cross by a Merino *ram*. I only mention this, however, as one mode amongst many that may be adopted.

Now, as to the wool of the pure Anglo-Merino sheep, I am particularly desirous of drawing the attention of your readers to the following observations upon some of the qualites which it possesses, of which they are, perhaps, in general uninformed and which constitute a very important point for our consideration. I think it will be granted to me, by those who have turned their attention to the subject of wool, that the superiority of our long English wool arises in a great degree from the *superiority of our pastures*, and the English *practice of feeding*, which, whilst it produces fat mutton, produces *long* and *strong* wool. Attention to the breed, and judicious selection, are of course *indispensable*, but the same sheep transported to any other country of Europe, and *fed* as they are on the Continent, would soon degenerate; the wool would become *short* and *brittle*, and the animal would also deteriorate for the want of the same skill in the breeders: the same causes which thus make our long wool the best in Europe, will operate upon the growth of the Merino wool, and produce,—indeed, has produced—a *new species* of wool of *indescribable* value, and which, for the same reasons as are applicable to the long wool, will be rarely found out of England: this wool has *length* and *strength* sufficient for *combing*, and spinning to such a thread as will be applicable to an infinite variety of manufactures, to which *Merino wool never was before applied*, nor does the high feeding much detract from the *fineness* of the hair, and nothing from its softness: the *foreign* Merino wool is short and brittle, and cannot by possibility be used for this purpose. I shall deposit, for the inspection of your readers, a small quantity of the wool combed, and the yarn spun, in your hands. I by no means wish to found on this idea the hope of any practicable exaction of a very high price for Anglo Merino wool, or to encourage breeders with the expectation of immense profit. I fully admit, that a breeder embarking in a Merino speculation must possess no trifling share of experience and industry, to make it pay as well as the pursuit of the ordinary track, or even to escape loss; but, I think, if he has both, he may *now* make it answer a *little* better; the *manufacturer* must, however, make it answer a *litle better* also; and if the breeder indulges in golden dreams for himself *alone*, he will overthrow the whole concern. I shall in the course of this letter endeavour to shew what is the LOWEST price for our wool that will cary us, breeders, through safely, instead of exhibiting prospects of advantage which can never be realised. If the manufacturers will bestow their skill upon our produce, and find a benefit in so doing, competition amongst themselves will sooner or later secure to us as good a price as the article will bear; infinite is the variety of manufactures to which this very fine combing wool has been already experimentally applied; and I think I am warranted in saying, that with such success as to insure us a *certain fair* market for our growth in future years, however much we may extend it.

It is extremely important for every sheep-farmer to estimate, *accurately*, the returns to be drawn from the wool *separately* from the carcass, in order to form a just comparison of the value of the different breeds; and I think this estimate is rarely made correctly; the calculation is formed upon each *individually*, instead of the aggregate flock, not considering that every flock-master, however he manages it, will have always more fleeces to sell than carcases. Take the case of those who breed and feed their stock round:—I will suppose them to have 200 ewes, from which they rear 200 lambs, 100 ewes, and 100 males, and that they dispose of one hundred of each every year. Now, if the wethers are sold at two-year-old, after the second clip, and 100 ewes in the autumn, there will be 500 fleeces to sell every year; that is to say, 200 ewe fleeces, 200 hoggets, and 100 wethers, their second fleece: any loss in carcass or gain in wool is then to be balanced. Suppose the comparison to be made between a South down flock and a Merino, under the same mode of treatment, I will give here a calculation which I think a fair one; at all events, it will lead the way to a fair investigation. The growth of Merino wool I take from my own flock of this year's clip. It is to be observed, the wool is unwashed

			Average.	
		lbs.	lbs.	oz.
Ewe fleeces	333	2372	7	2
Hogget ditto	145	1392	9	9½
Wether ditto	142	1460	10	4
Rams . . .	22	286	13	0
	642	5510	Av. 8	2

On this data 500 fleeces will produce 4281 lbs. of wool, &c. which I will here suppose to be sold at 1*s.* 6*d.* per pound, being for the whole £321. 1*s.* 6*d.* or for each fleece 12*s.* 11*d.* The weight of the South-down fleeces I average as follows; and having had for many years a South-down flock which I treated in the same manner, I think I can rely upon my statement being a fair one, viz.—ewes, 3 lbs.; wethers and hoggets, 4½ lbs. I know that some breeders carry the quantity higher, but I never did on the average of the *whole* flock, and I think many flocks do not equal it.—The account will stand thus:—

200 Ewes, at 3 lbs.	600 lbs.
300 Wethers and hoggets, at 4½ lbs.	1350 lbs.
	1950 lbs.

Now, by a singular coincidence (for I can discern no reason for it), I have almost invariably sold my unwashed wool for the average price of the South-down washed wool, and have this year sold for 1*s.* 6*d*, which is about the price the South-down wool sells for. The account will be for the total of the wool £146 5*s.*; or per fleece averaging 3 lbs. 14 oz. say in money 6*s.*, and the balance on the wool account in favour of the Merino flocks will be £174 16*s.* 6*d.*

Merino . . . . ,	£321 1 6
South-downs . . .	146 5 0
Balance	£174 16 6

Or per head Merino	12*s.* 11*d.*
South-downs . . .	6*s.* 0*d.*
Balance	6*s.* 11*d.* per fleece.

We see here how large a balance the South-down flock has to contend against in the article of wool; there being only two hundred carcases to sell annually, 17*s.* 6*d.* more must be produced on each carcass to make up this difference. If the mutton will sell for the same price, and the market gives even 5*s.* per stone, it requires 3½ stone; and at the present time, as much more as the price is lower than 5*s.* But suppose the comparison was made individually, the second fleece being taken off the wethers, the South-down must exceed, in value of carcass, the Merino, to the amount of 13*s.* 10*d.* to balance the inferiority of wool, and the ewes must sell proportionally higher; and I think the South-down breed will not accomplish such an equivalent in either case: indeed, the depression in the price of wool might be carried further, if equally, on the South-down and Merino and the latter would still have the advantage. I have sold at 1*s.* 3*d.* in the grease, and by comparison with the South-down, under similar depression, I am now quite satisfied. I cannot doubt, especially as considering the circumstances stated in the former part of this letter, respecting the quantity and use of British Merino wool, that it did always bear a price as much higher than South-down as at present. As to quality, I affirm that I can find, on all occasions, as good a price for the Merino mutton as any other, but I will admit a loss of a stone and a half on the carcass in weight, and that they have not at present so full a muscle. The colour of the flesh is very bright and clear, and looks remarkably well; they carry a large proportion of inside fat, but the carcass, altogether, weighs light in proportion to size: these are, however, defects to be remedied in time, by judicious selection. It cannot be done certainly so soon as if we had large numbers to draw from; but I have already made such an advance as affords *proof* of the practicability of accomplishing, eventually, as much improvement in this breed of sheep, in these particulars, as has been made in any other. I do not think it necessary to give any detailed estimate of flocks under a different system of management: if the wethers are sold when lambs, the proportionate number of fleeces and carcasses will be different; but the same mode of calculation being pursued, the *true* result will be found, instead of that which, being drawn from a comparison of individuals, is completely fallacious: neither will I attempt any comparative estimate of value with the long-woolled sheep of the *richest* pasture districts, because I do not think it desirable to stock such grounds with any other sort. I have seen some crosses between Merino and Leicester producing a most useful fleece and good carcass, and well calculated to graze the Midland districts. The wool of this cross is available for many articles of our manufacture, and which are in great demand. As to the treatment of the Merino sheep, *generally*, I have nothing to say because they appear to me to require nothing different from that which is due to others, except, indeed, that as they stand more in need of *improvement* than the South-down, for instance, they ought to be more attended to, and better fed, and less worked, if folding forms a part of the system. I think them as healthy as any other; quite as free from diseases to which sheep are liable, but I have no opportunity of knowing whether they could bear the mountainous districts of the North. As far as my experience goes, they seem not to regard the cold more than any other; they eat dry meat, and even straw, with great avidity: they do well upon turnips, and in my irrigated meadows thrive exceedingly.

Thus have I occupied in this statement more space than may be convenient for you to spare, but I have been unable to render it more concise. I am very fully convinced that the Merino sheep eminently deserve the attention of the British farmer, and that by extended cultivation of them the woollen manufactures of the kingdom may be infinitely improved and diversified, and that we may grow a species of wool, such as I have described, fine, long, and strong, which cannot be had elsewhere; and from which, consequently, various fine articles may be made, which cannot be produced in other countries. If, in any degree, I contribute to effect this object, I shall so far promote the true interest of the country. My farm and flocks are always open to inspection, and my bailiff and shepherd will give every information in their power to those who are anxious to see and judge for themselves.

I am, sir,
Your ob't humble serv't,
CHAS. C. WESTERN.

Extracts from late Numbers of The London Farmer's Journal, received at the Office of the American Farmer.

ON POPULATION.—Supposing the earth to be peopled with one thousand millions of inhabitants, and allowing thirty-three years for a generation, the deaths of each year amount to 30,000,000—of each day, to 82,000—and of each hour, to 3446. But as the number of deaths to the number of births is as 10 to 12, there are born yearly 36,000,000—-daily, 98,630—-and hourly, 4109. Reckoning only three generations to a century, and supposing the world has existed 5700 years, there have been only 172 generations from the Creation, 125 since the Deluge, and 55 since the Christian Æra. Out of every 1000 there die annually 30; and the number of inhabitants of every city and country is renewed every thirty years. Of 200 children, one dies in the birth; but more than one-third of the births die within two years of age. The births are more numerous than the deaths in any given place; and the proportion of the births of male and female are not in a wide disproportion, not an uncertain accidental number, but nearly equal.

King Charles II. asked Stillingfleet how it came about that he always read his sermons before him, when he preached *extempore* elsewhere! He told the King that the awe he felt of so noble an audience made him afraid to trust himself, unless he put his discourse into writing. "But pray, says Stillingfleet, "may I be permitted to ask you a similar question?—Why does your Majesty read your speeches, who can feel no awe from the presence of superiors?" "Why, truly," replied the King, "the question is a fair one, and so shall be my answer. By reading my speech I keep my eye upon the paper; for I have asked supplies from the Commons so heavily, and they have granted them so often, that *we are ashamed to look each other in the face.*"

A singular circumstance occurred lately, at the church of St. Botolph, Aldersgate, London. Two persons, apparently of humble condition, were marrying at the altar, and the clergyman had arrived at that part of the ceremony where he says, "Wilt thou have this woman for thy wedded wife?" when the bridegroom making no reply to this question, the clerk said to him, 'You must answer, 'I will.'" Instead of doing so, however, he fixed his eye intently on the clerk, and exclaiming, "I will!—*but I wo'nt!*" took up his hat, and left the church. He was followed out by a person, apparently to expostulate with him, but they were seen no more. The poor girl was quite overcome at the fellow's baseness, and it was some time before she recovered sufficiently to leave the church with her friends.

Sir Everard Home has recently made some inquiries by way of comparison between the auricular organs of man and quadrupeds. The result of his researches seems to prove that shrill tones, or the upper notes of an instrument, have comparatively little effect in exciting the attention of animals, whilst the full lower tones stimulate them almost to fury. Sir Everard observes, "that the effect of the high notes of the piano-forte upon the great lion in Exeter Change, only called his attention, which was considerable, though he remained silent and motionless. But no sooner were the bass, or lower notes, sounded, than he sprung up, lashed his tail, and yelled violently, and endeavoured to break loose; and became altogether so furious, as to alarm the spectators present. This violent excitement ceased with the discontinuance of the music." The deep tones of the French horn also produced a similar effect with the lower tones of the piano-forte, on the elephant, and other animals on which the experiment was made.

Editorial Correspondence.

Springdale, December 15th, 1823.

DEAR SIR,

In your paper of the 12th, a writer, under the signature of Philo Agricolas, asks "whether the corn was or was not shelled," which measured one hundred and seventy bushels from an acre in the state of New York.

The extraordinary crop of corn, to which I presume your correspondent alludes, was raised in the summer of 1821, by the Messrs. Pratts, of Madison County, New York,* the crop measured five hundred and two and a half bushels from three acres, making one hundred and sixty-seven and a half per acre, *shelled* corn, (not one hundred and seventy bushels, as Agricolas supposes). The proofs which I have in my possession I consider indisputable. The singular manner in which this crop of corn was planted, will account, in some measure, for the almost incredible yield.

Perhaps if your correspondent saw the inclosed extract of a letter from Earl Stimson to Governor Clinton, in relation to a crop of corn, raised by the former, in the year 1821, the doubts which he has indirectly expressed of one hundred and sixty-seven and a half bushels of *shelled* corn, being raised from one acre, would be removed

If you will refer to the Winchester paper, (which I suppose you have in your office) you will find our society, gave a premium for a crop, amounting to one hundred and twenty-three bushels of *shelled* corn, from each of two acres.

Respectfully,
WILLIAM M. BARTON.

JOHN S. SKINNER, ESQ

Extract from Governor Clinton's letter to Mr. Barton.

The inclosed communication from Mr. Stimson will inform you of his mode of raising corn, in addition to which, he says, I grew about fifty acres of corn in 1821, out of which it was judged that twenty or thirty acres might have been selected, which would produce from one hundred to one hundred and twenty-seven bushels per acre, when fit for the crib. The acre which was selected for premium, produced rising of one hundred and twenty-seven bushels."

Annapolis, Dec. 28th, 1823.

DEAR SIR,

I send you a copy of a receipt for a cheap white paint, which I have had for several years, but never tested it till this fall, and find it admirably calculated to add to the neatness of appearance of cottages, or for any building, when the owner wishes to avoid the expense of painting, as generally practised with oil, white lead &c.—viz. either for inside or outside work take sweet or new milk, two quarts—fresh slacked lime, half a pound—linseed oil, six ounces—burgundy pitch, two ounces and five pounds of Spanish whitening The lime to be slacked in water, exposed to the air, mixed in about one fourth of the milk. The oil in which the Burgundy pitch is previously dissolved, to be added a little at a time, then the remainder of the milk, and afterwards the whitening. This quantity is enough for twenty-seven square yards, two coats, and the expense trifling. Add lamp black, and ivory black, to make a lead colour. It will be better if ground down with a mullar and slab.

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* *See Am. Far. Vol. 5, page* 264.

One of the best and cheapest paints for the roof of a house, that I know of, is the *gas* oil, mixed with stone or shell lime—I usually put about five double handsfull of lime into a bucket, containing about four gallons of the gas oil, and then lay it on with a painter's brush; two coats will give you a handsome glossy slate colour, and will be found to be very cheap and durable. Old brick houses nicely whitewashed, with such a roof as above described, have a very neat appearance. The smell of the gas oil is very offensive for a few days, but by choosing a favourable wind, and dry time when putting it on, it will be in a great measure avoided.

Your's respectfully,
R. J. JONES.

* * *

"*Two of a trade seldom agree.*"—The *Tallow Chandlers*, says the Boston Centinel, appear determined to extingush the *light* which the *Whale-oilmen* have shed on Congress by their memorial for an augmentation of the duty on *tallow*. The former declare that the representations of the latter are over *strained*, and that with all their complainings they have waxed *fat* under existing regulations; while the latter aver, that the former live by a borrowed *light* at their expense, and do not *melt* at the sufferings of their neighbors.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 9, 1824.

CATTLE MEDICINE.

At the instance of a practical farmer of excellent judgment, the very spirited booksellers, Messrs. Carey & Lea, of Philadelphia, have published a small volume under the following title, which amply and justly indicates the contents of the work:

"A compendium of Cattle Medicine, or practical observations on the Disorders of Cattle and the other domestic animals, except the horse.—With a series of essays on the structure, economy and diseases of horned cattle and sheep, as communicated to the Bath and West of England Society. By JAMES WHITE, late Veterinary Surgeon of the first, or royal dragoons."

Every farmer, who sets value upon *understanding*—and who does understand his own interest, and values properly the character of his children and family, should have for their amusement and instruction, an *appropriate library*, which should be *well selected*, rather than *voluminous*, and should have reference to the calling his children are destined to pursue, and the station they are destined to hold in society. The book in question, would necessarily make part of every *farmer's* library. At all events, there is on every farm, such frequent occasion to treat cattle, sheep and hogs for various diseases and accidents, which if not soon removed, are sure to destroy—that every one should have this volume within his reach, at a moment's warning.

It may be had in this city of E. J. Coale, Esq. price 87½ cents.

SEED SENT TO THE EDITOR OF THE AMERICAN FARMER FOR DISTRIBUTION—SINCE OUR LAST REPORT.

Fort Osage, (Mi.) Nov. 24, 1823.

SIR,

I send you two small parcels of buffalo or rabbit berries, recently brought from the Upper Missouri, near the Recara Towns, where they are found in great abundance.

The tree is of the size of a common plum tree, is described as being very pretty, and when loaded with ripe fruit, exceedingly rich and beautiful. The fruit is much like the red currant, though much larger, and is said to be very delicious and wholesome. If I am not misinformed, this fruit is quite equal to the cramberry and currant for jellies, sauces, tarts, &c. and will certainly be a very valuable addition to our cultivated fruits, if it can be raised from the seed; which I am pretty sure can be done. It is found growing most luxuriantly on the sand flats, near the Missouri, where there is a mixture of sand, and river slime and mud; but it also grows well on the uplands, and, indeed, seems to be thrifty in almost any situation on the river. There is some mention of this fruit in "the Journal of Lewis and Clark's expedition," particularly in *pages* 51 *and* 114.—1*st Vol.*

Respectfully,
Your most ob't serv't,
G. C. SIBLY.

Extract of a letter from Dr. J. S. Bellinger, of Burnwell District, S. C.

SIR—"I send you a small parcel containing Guinea grass seed of this year's growth. I had this season, seed from what may be termed the volunteer seed, being produced from Guinea grass which had come up from the *shelling* of the seed the year before. I also send you a small parcel of the sword bean."

In addition to the above the Editor acknowledges the receipt of a quantity of Guinea grass seed from Gen. Thomas Pinckney of South Carolina.

* * *

Since our last, no change has occurred in the prices of the articles usually reported in this paper—we have enquired for, but have not heard of any sales of tobacco. The last quotation was made after the most particular enquiry as to each item, and may be taken as a correct account of prices this week. The New York Gazette of the 6th inst. gives the following account of sales of southern and western produce:

"The editors of the Gazette have received from their New Orleans Correspondent the papers of that city to the 16th ult. Their stock of Cotton was fast increasing. Buyers were holding back, although it was supposed the crop would be short. Tobacco went off freely at 4¼ for best. The Robert Fulton brought down from Natches nearly 1000 bales of cotton, the price of which is quoted at from 14 to 19 cents. The waters had not reached the desired height. There were in port 25 ships, 51 brigs, 11 schooners and 9 sloops and about 50 sail in the river, bound up—freights of course dull."

IRELAND.—The Thermometer in Ireland in the months of June, July and August last, did not average sixty degrees, and an unusual quantity of rain fell: the consequence is that the potato crops are very scant, and the article itself of an inferior quality. The potato in Ireland has heretofore been planted altogether with the spade; recently, however, the seed potatoes have, in some instances, been put into the ground with the plough. The crops, last fall, of those put in with the plough would not pay the expense of getting in—and the potatoes were of a quality greatly inferior to those that had been planted with the spade. An eye-witness informs us that so late as the 27th of October last, travelling from Belfast to Dublin, he saw many acres of *Oats* quite green from the want of sun to ripen them.—*Dem. Press.*

VACCINE INSTITUTION.

The late law of the United States to encourage Vaccination, having been repealed, many persons have been led to believe, that I had entirely abandoned this Institution; while others more unhappily have been induced to suppose that some terrible defect had been discovered in the Kine Pock itself. Both of these impressions are founded in error. Perfect Vaccination continues to be a perfect preventive of the Small Pox; and the genuine Vaccine Matter is still preserved, as heretofore, with the greatest care.

The general prevalence of the Small Pox,* and varioloid diseases at this time, in the city of Philadelphia, should not be imputed to the inefficacy of the Kine Pock. These plagues may be justly attributed to the neglect of vaccination, and to the use, that is commonly made of imperfect and adulterated matter. Spurious vaccine matter (of which several distinct varieties are known to me) is always productive of an imperfect kind of vaccination, that, unavoidably, leaves the persons concerned liable to be affected by the above mentioned diseases, at any time during life. But I have never yet known any one person to take either the Small Pox or varioloid disease, where genuine vaccine matter was used, and the pock was known to have terminated in a perfect crust.

Regular supplies of Vaccine Matter from the stock I have preserved here, without any change for nearly twenty-three years, will be forwarded, as engaged, to all persons who have subscribed to this Institution, during the year past—and others who want this remedy from me, with my directions for using it, will be furnished with it regularly, on their paying in advance, or engaging to pay five dollars annually for the same.

All former subscribers to this Institution who have paid ten dollars or less, will please to recollect that the *term of five years*, for which I engaged to supply them with vaccine matter, *expired on the first day of January*, 1823—as heretofore notified. I will be gratified, nevertheless, to continue to supply them; if they will, at any time, signify to me their willingness to pay the same fees for it, as must necessarily be charged to all persons, who obtain this remedy from this Institution, previous to its permanent establishment, on the liberal plan I proposed: to effect which, no proper exertions on my part shall be wanting.

Should any annual subscriber to this Institution want the seed of medical, or any other rare and useful plants, that can be procured, either in the United States, or from abroad, I will be happy to make this Institution serve as the medium, through which any such seed may be procured, on the lowest terms, if not entirely free of expense. No charge will be made by me for any service I can render in this way. The postage on all letters to me must be paid, otherwise they cannot be received.

JAMES SMITH,
Late Agent of Vaccination
for the United States.
Baltimore, January 8th, 1824.

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* *One hundred and fifty souls are stated in the Bills of Mortality, to have perished by Small Pox in Philadelphia, since the* 1*st November last.*

AGRICULTURE.

CATTLE,

VARIOUS BREEDS—LARGE OXEN.

[Of neat cattle, there are various races, some best adapted to the yoke—some to a milk dairy—some to a butter dairy—some to the butcher's shambles, and some so ill formed, unthrifty and unprofitable, as to be fit only for hounds and buzzards.

It becomes all farmers, let their number be few or many, to keep such as are best adapted to their particular purposes; and this can only be done by making themselves acquainted with the peculiar properties and propensities of each race.

It is in England, that the most persevering and best directed efforts have been made, to perfect the various breeds, with a view to different purposes; and such has been their success, that it is now understood, that by successive and judicious selections and crossings, a breed of cattle, sheep, or hogs, may in a somewhat longer process of time, be *made up*, possessing any given colour, shape or quality, with almost as much certainty and precision, as the manufacturer can give to the productions of the loom, such stripes and texture as his fancy may suggest.

We shall endeavour to give our readers such information, as will enable them to understand the characteristic points of the breeds now most esteemed in that country, beginning with the "Improved short horns," which appear to be more in demand, and to sell for higher prices, than any other family of cattle at this time.—They were formerly found in greatest numbers and perfection in the county of Durham, on both sides of the river Tees, and hence the appellation of the Tees water breed. But this breed has of late years been greatly improved upon, and of this stock, so meliorated "THE IMPROVED SHORT HORN," is now the established and appropriate designation.

It is already known to the readers of the American Farmer, that we have this breed of cattle, in their greatest purity and perfection.—In Massachusetts, on the estates of Samuel Jacques, Esq. of Charlestown, owner of Cœlebs, and Stephen Williams, Esq. of Northborough, owner of Denton—also a bull presented to the Massachusetts Agricultural Society, by Admiral Coffin of the British Navy, a native of Massachusetts. In Pennsylvania, the only full blood stock of this breed, male and female, that we know of, are in the hands of Col. J. H. Powel, and in Maryland at Wye farm, the elegant estate of Col. Lloyd, of the Senate of the U. S. may be seen the bull Champion, and heifers White Rose, and Shepherdess, imported in the spring of 1822, by the Editor of this paper, from Charles Champion, Esq. from whom Gen. Van Ranselaer, has ordered a bull and two heifers, to enrich and ornament his vast estates in the state of New York.

The following is the pedigree of Col. Lloyd's bull Champion, as given in his letter to J. S. Skinner, dated 6th of April, 1822.

"I had named him *Blythe Union*, in consequence of being bred both from Colling's and Coats' best blood, but I request you will give him any name you think most suitable; if you think he deserves it, I shall he proud for him to be named *the Champion: he was* got by Warrior, for whose dam I paid Mr. Robert Colling 200 guineas, his dam was by Blythe Comet, whose dam I bought at Mr. Charles Colling's sale, for 170 guineas. Blythe Comet was also the sire of the ox in my group of animals which you have, and he was bred *in* and *in* from Comet, who was sold for 1000 guineas, at Charles Colling's sale in 1810:—his *gran-dam* was by Mr. George Coats' Palm Flower, who is own brother to my cow Crimson, for which I gave Mr. Coats 100 guineas when 13 years old, and Crimson is the dam of my bull Blaze, by Blythe Comet, which I am now using, and I hope your two heifers are in calf to him, as he is considered the most complete animal I ever bred, for symmetry and quality.—*His great gran-dam* by Patriot, the bull you named in one of your letters, and which Mr. Coats sold for 500 guineas, so that your bull partakes of Colling's and Coats' best blood."

This calf by Blaze, out of White Rose, came in November 1822, took the premium at our last Agricultural Exhibition in Maryland, under the name "Pilgrim," was sold to Col. Powel on the ground, and now bears at Powelton, near Philadelphia, the name "WYE COMET," of the origin and history of these cattle, we find the following in the "SURVEY OF DURHAM."]

Edit. Am. Farmer.

THE TEES WATER BREED.

An attempt to improve them, (which I suspect was more with regard to size, than any other quality,) was made by Mr. Michael Dobinson, of the Isle, near Sedgefield, who brought a bull out of Holland, that is said to have improved the breed. A few years after, some other adventurers went over to Holland, and as *great bulk*, was then considered as the criterion of perfection, they brought home a complete lyery animal, with immense buttocks, which did a great deal of mischief; but there were some intelligent breeders that steered clear of this evil;* and from them the pure Tees water breed has descended to the present time, in which were united the properties of feeding to great weights, and being great milkers.

The visitants of Mr. Bakewell having seen what he had done with the long horns, by selection; and at how much earlier ages they got fattened, were induced to try what could be done by similar means, with the short horns; and several selections were made for this purpose with great success.

The first particular recorded instance of the Tees water breed, for fat and great weight, was an ox of Mr. Hill's, of Blackwell, which was killed at Darlington the 17th December, 1779, at seven years old; the particulars of his weight are as follow:

	lbs.
Two fore quarters	1057
Two hind ditto	1067
Carcase	2124
Tallow	154
Total	2278

The next was a five years old ox, of Mr. Milbank, of Barningham, killed at Barnardcastle in April, 1789:—he weighed—

	lbs.
Two for quarters	1044½
Two hind ditto	1060
Carcase	2104½
Tallow	224
Total	2328½

This ox being at five years old only 19½ lbs. less than Mr. Hill's ox in weight of carcase, and having five stones more tallow, was certainly of a superior breed for fatting at an early age; and most probably was descended from the breed mentioned by Mr. Corner.

At that period it was thought that no ox could be made properly fat under five years old; and I remember going in the year 1786, to see as a curiosity, a steer 3½ years old, of Mr. Robinson's, of Hutton, that was supposed to weigh 1120 lbs, and had been sold for £20.* But to select a variety to fatten at a much earlier age than had ever yet been obtained, was left to the breeders of the present day to accomplish, who had the judgment to select, what accident threw in their way.

In the spring of the year, Mr. Basnett, of Darlington, purchased a cow, with a bull calf at her foot, and putting her into a good pasture, she got so fat, it induced him to dispose of her to a butcher in the August following, and the calf was sold to a farmer in the neighbourhood. At four years old he was purchased by Mr. Robert Colling, and Mr. Waistell, of Alihill, who at that time did not keep a bull for any other purpose than serving their feeding cows; but Mr. Colling finding him have a great propensity to get fat, sold him to his brother Charles Colling, who was then beginning to breed, and anxious of selecting those with the best dispositions to fatten: for the same reasons, and with the same view, he soon after purchased of Mr. Maynard, of Ayreholm, a cow, and a heifer, her daughter.

This bull and cow, selected with so much judgment, are the original stock from which the celebrated Durham ox, and the justly acknowledged superior breeds in the possession of Mr. Charles Colling, Mr. Robert Colling, and Mr. Christopher Mason, are descended.

Messrs. Collings have frequently sold cows and heifers for £100, and bull calves at £100. Mr. Charles Colling has refused £500 for a cow; and in 1807, Mr. Mason refused 700 guineas for a cow.

These gentlemen let bulls out by the year; the prices from 50 to 100 guineas; and the public are so fully convinced of their merits, that these celebrated breeders cannot supply the demand from the PURE BLOOD, which they are as cautious of preserving, as the amateurs of the turf are the breeds of their race horses, and which the takers of bulls are become so well acquainted with, that the prices they give, are in proportion to the good qualities of the individuals, and merits of their progenitors—more regard being paid to their pedigree than to any thing else; for this purpose they have books containing the full pedigree of their stock, similar to the stud book of race horses, by which any person wanting to purchase any of their stock, or to hire bulls, may see how they are descended.

Of the surprisingly fat individuals of this variety, numerous instances might be produced:

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* *Of these, Mr Milbank, of Barmingham, and Mr. Croft, of Barford, were the most eminent—and were considered as having the best and purest breed of the district at that period, (about 70 years since;) the colours of their cattle were red and white; and white with a little red about the neck, or roan.*

This information was communicated by Mr. Thomas Corner, now near 90 years of age; and Mr. George Culley says, that he has repeatedly heard his father state the same particulars.

The colours of the above being similar to those of the present improved breed of short horns, makes it probable that they are descendants of the same race.

* *Four and one-fourth pence per pound, was a great price at that time.*

I shall select one most deserving of notice, and well known in most parts of the kingdom by the name of

The Durham Ox;

Was bred by Mr. Charles Colling, of Ketton, in the year 1796: his form and nice handling, indicated every disposition to fatten at an early age and the expectations entertained of him by the best judges, were not disappointed: at five years old he was not only covered thick with fat upon all the principal points, but his whole carcase in a manner loaded with it, and was then thought so wonderful an animal, and so far exceeding whatever had been seen before, that he was purchased to be exhibited as a show, by Mr. Bulmer, of Harmby, near Bedale, in February, 1801, for £140: at this time he was thought to weigh 2352 lbs., his live weight being 3024 lbs.: this did not arise from his superior size, as will be seen on comparison in the following table containing

THE DIMENSIONS OF GREAT WEIGHTED OXEN.

Names of Oxen.	*Age*	*Length from horns to rump.*	*Height at*			*Girths at*			*Breadths at*		*Weights of*		
			Crops.	*Loins.*	*Breast from ground.*	*Crops.*	*Belly.*	*Loins.*	*Hips.*	*Shoulder.*	*Carcase.*	*Tallow.*	*Hide.*
		Ft. Ins.	*Ft. In.*	*Ft. In.*	*Ft. In.*	*Ft. In.*	*Ft. In.*	*Ft. In.*	*Ft. In.*	*Ft. In.*	*lbs.*	*lbs.*	*lbs.*
Blackwell	6	9 5½	6 0	5 8	2 1	10 6		9 7	2 10	2 10¼	2124	154	126
Howick Red	7	9 4	6 0	5 10	1 11½	10 0	10 8	10 1	2 10	2 9	2137	231	128
Ditto Mottled	7	9 8	5 10	5 9½	1 7	9 8	10 10	9 10	2 11	2 7	2136	224	137
Barningham	5										2104	224	128
Mr. Charge's	7	8 2	6 2		1 8	10 7	10 8	10 10	2 9	3 0½	2362	182	
Mr. Colling's	5	8 4	5 3	5 5	1 6	10 0	10 2	10 3	2 7	2 7	2352		
Ditto	10										3080		

Mr. Bulmer got a proper carriage made to convey him in, and after travelling with him five weeks, sold him and the carriage at Rotheram, to Mr. John Day,

	£	s.	d.
On the 4th of May, 1801, for	250	0	0
On the 14th May, Mr. Day could have sold him for	525	0	0
On the 13th June, for	1000	0	0
On the 8th July, for	2000	0	0

Mr. Day preferred keeping him, persuaded that his merits were such, as would ensure him a greater return: but these prices are strong proofs of his very superior excellence, to whatever had been seen in those districts before.

Mr. Day travelled with him nearly six years, through the principal parts of England and Scotland, and arrived at Oxford, in February, 1807, where on the 19th, the ox by accident dislocated his hip bone, and continued in that state until the 15th April, when he was obliged to be killed; and notwithstanding he must have lost considerably in weight, during this eight weeks of illness, yet his carcase weighed

	lbs.
Four quarters	2322
Tallow	166
Hide	142*

This was his weight at 11 years old, under all the disadvantages of six years travelling in a jolting carriage, and eight weeks of painfull illness; had he been kept quietly at Ketton, and properly fed until seven years old, there is little doubt but he would have weighed more than he did at ten years old, at which age Mr Day states his live weight to be nearly 34 cwt. or

	3780 pounds.
From which if there be taken for offal	700
Leaves the weight of the carcase	3080 pounds.

Mr. Charge's ox was of the same breed as the Durham ox, being descended from a bull of Mr. Charles Colling's: he had been unwell for some time before he was killed, which reduced his weight considerably, at least 112 or 140 pounds.

* * *

FROM THE NEW ENGLAND FARMER.

The following valuable communication will be highly and justly appreciated by the good sense of American Farmers. It will meet the more attention, and carry with it a *greater weight of authority* from the important circumstance that the writer has not given us the *speculations of theory*, but the *results of practice*. It is a plain unvarnished matter of fact relation of what a cultivator *has done*, the means, expenses, and profits attending a particular mode of husbandry, and certain rotations of crops in a light sandy loam.

We hope Mr. BUEL will pardon us for printing the following article with his *name attached*, notwithstanding some objections which he stated. An *anonymous* article will make less impression, and produce less benefit, other things equal, than one which has the signature of a well known, and respectable author: and we have taken it for granted that Mr. Buel has no insurmountable objection to lending his name to his disinterested and patriotic efforts to benefit the community.

Edit. N. E. Far.

Estimate of the expense and profits of cultivating an acre of sand loam under two different courses of crops.

EXPENSE—FOUR YEARS COURSE.

First Year.

30 loads of long manure, 30 bushels each, at 75 cents .	$22 50	
A man one day spreading the same	50	
Ploughing $1, rolling or harrowing 25 cents . . .	1 25	
2 days planting . .	1 00	
2 do. harrowing and weeding $1, boy and horse 25 cents .	1 25	
2 days ploughing and earthing or hilling . . .	1 00	
3 do. cutting and binding .	1 50	
2 men 1 day carting off and stooking . . .	1 50	
4 days husking and cribbing 80 bushels corn . .	2 00	
1 day housing stalks . .	50	
6 quarts seed 12 cents, 1 bushel gypsum 50 cents .	62½	
		$33 62½
Boy and team half a day harrowing stock ground . .	50	
Ploughing, do. . . .	1 00	
Sowing wheat and harrowing in	62½	
5 pecks seed, at $1 25 .	1 56	

Second Year.

2 days cutting and binding wheat	1 00	
2 men half a day drawing in do. to barn	75	
Threshing 25 bushels at 6 cents per bushel . . .	1 56	
		$6 99½
Ploughing and harrowing stubble	1 25	
1 lb. turnip seed, and sowing, 88 cents, harrowing in do. 25 cts.	1 12½	
10 loads manure and spreading same	7 66	
4 days hoeing and thinning turnips	2 00	
6 ditto pulling and topping	3 00	
		$15 03½

Third Year.

1 day ploughing . . .	1 00	
1½ bushels seed barley . .	1 00	
10 lbs. clover seed at 10 cents	1 00	
Sowing barley and seeds, half a day	25	
Harrowing both ways . .	50	
Harvesting barley $1, drawing in 75 cents . . .	1 75	
Threshing 30 bushels at 4 cents	1 20	
		$6 70

Fourth Year.

2 day's cutting one acre clover	1 00	
4 do. making hay and carting in	2 00	
		$3 00
Rent at $5 per annum . . .		20 00
Total expense in 4 years . . .		$85 35

PRODUCE.

70 bushels sound corn, at 50 cents . .	$35 00	
10 bushels soft do. 25 cts.	2 50	
4 loads stalks, at $2 50	10 00	
		$57 50
25 bushels wheat at 1 25	31 25	73 75
2 loads straw, at 2 50	5 00	
200 bush. turnips at 18 cts.	37 50	

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* *From Mr. Day's pamphlet, giving an account of this ox, the places he was shewn at, and distance travelled, during the time he was in his possession.*

30 do. barley, at 62½ cts.	18 75		
2 loads straw, at 2 50	5 00		
		23 75	
3 tons hay, at 12 50 .	37 50		
Feed of aftermath, .	3 00		
		40 50	
Total value of products . . .			195 50
Deduct expenses . . .			85 35
Profit			$110 15

or $36 66 per annum.

FIVE YEARS COURSE.

First Year.

Indian corn, as above . . .		33 62½

Second Year.

Wheat	6 99½	
10 lbs. clover seed and sowing	1 12½	
		8 12

Third Year.

Hay as above . . .	3 00	
10 loads manure to be spread on lay , . . .	7 66	
1 ploughing and 2 harrowings	1 50	
1 lb. ruta baga seed . .	62½	
Drilling in same . . .	37½	
1 weeding, four days .	2 00	
1 dressing with cultivator or plough	25	
4 days pulling and topping .	2 00	
		$17 41

Fourth Year.

Barley as above . . .	6 70	

Fifth Year.

Clover as before . .	3 00	
		$68 85½
Rent 5 years, at $5 . . .		25 00
Total expense		$93 85½

PRODUCE.

1st Year, corn, as before .		57 50	
2d Year, wheat, do. . .		35 75	
3d Year, clover, do.	40 50		
400 bushels ruta baga, at 12½ cents .	50 00		
		$90 50	
4th Year, barley . .		23 75	
5th Year, clover . .		40 50	
Produce in five years .			$248 00
Deduct expense and rent			93 85
Profit . . .			$154 15

or $30 83 per annum

I have omitted to charge for threshing corn and pitting ruta baga, and to credit for turnip and ruta baga tops, which may offset against each other. Two bushels of gypsum should also be charged, which is sown upon the two clover crops in the five year course.

It may be well to remark, that potatoes are embraced with Indian corn, in the first year of each course, and that so far as the demand will warrant their culture, they are more profitable, and less exhausting, than corn.

The above estimates are predicated upon my own practice for the last five years, and are as accurate as my memorandums and memory will enable me to make them, except in regard to the price of labor, which is perhaps too low, though it corresponds with average prices.

The propriety of appropriating light loams and sands to convertible husbandry, that is, to a succession of grain, grass and root crops, is apparent from several considerations. Such soils will seldom give more than two good crops of grass, or grain, in succession, without expensive manuring or top dressing. Hence they are not profitable for permanent grass or tillage. But under good management, and a judicious rotation of crops, they may be made to improve in quality, and to excel in profit: because they can be managed with half the expense in labor that is appropriated to stiff and adhesive soils under tillage. The history of Norfolk husbandry, affords a demonstration of these truths. Flanders exhibits a yet more striking evidence of their correctness. These two districts, which are mostly composed of sands and light loams, surpass all others in neat and profitable husbandry. In both, a rotation of crops is the basis of improvement. In both, summer fallows are nearly abolished; and only resorted to to cleanse a foul soil. In Norfolk, it is a general rule, never to take two white crops (such as wheat, rye, barley or oats) in succession,* while the Flemings are equally scrupulous in the observance of the maxim which enjoins that no field shall lay more than ten days without a crop.† A late traveller remarks, that he saw in a large field, in Flanders grain harvested, and the stubble ploughed and sown with turnips the same day.

I will subjoin a few observations on each of the crops embraced in my system of rotation.—And

1. *Indian Corn.* This not only gives more food to man, and to beast, than any other grain, but it gives more to the soil, in the form of manure, where the stalks are fed in a well constructed yard, as they ever should be. It is less exhausting than other grain; first, because of its broad and expansive system of leaves, which draw largely upon the atmosphere for food; and second, because, under my method of culture, it is cut before the leaves cease to perform this office, and consequently before the grain depends for its nutriment wholly upon the soil. It is peculiarly adapted to a loose, warm soil. Although a profitable crop, on such a soil, when well fed and cleaned, it returns little or no profit from one that is poor, wet or stiff, I make it the basis of my course. It answers all the purposes of a naked summer fallow, in cleaning the ground, and decomposing the soil. Although clay may require to be summer fallowed, for the further purpose of pulverizing a fallow crop, and that a hoed crop, I believe every reflecting man will admit, answers every beneficial purpose on light loams and sands. I spread my manure, and plough about the first of May. I prefer this time, because the clover has then acquired a good growth,—and, turned under with the manure, affords an excellent bed for the roots of the grain, with ample room to range, and abundance of food to nourish. I then, either with the roller or harrow, close the interstices between the furrows, to prevent the escape of the gasses, and to cover the manure from the exhausting influence of the sun and winds. The decay of the roots soon renders the ground permeable to heat, light, air and moisture, which all contribute to promote vegetation. The seed is then planted in hills, at the distance of 30 inches each way. I pass a harrow, at the first dressing, both ways, and with the hoe do little more than destroy the weeds and grass. At the second and last dressing, I plough shallow, and earth or hill slightly, taking care not to disturb the roots, or to bring the manure to the surface. As soon as the grain is glazed, which has been invariably the first week in September with me, I cut the crop at the surface of the ground, with a hemp hook, laying four hills in a bundle, bind above the ears immediately, take it off the field on sleds, and stook it near my barn—and husk it when convenient. By this course I save labour, double the value of the fodder, and clear my ground in time for wheat. The stooks will not injure if put up wet, the ears keeping the stooks open to the air. The gypsum is sown before the ground is ploughed. All other things alike. I think the clover lay increases the crop from 25 to 30 per cent. and tends to counteract the effects of drought.

2. *Wheat.* The requisites for a wheat crop, are a clear, mellow and rich tilth. If either of these are wanting, or the soil be very porous or sandy, rye should be substituted. If long manure is applied directly to this crop, it introduces weeds and grass; and although the straw may be luxuriant, the grain is often light and shrivelled. If suffered to ferment in the yard, the manure loses nearly half its value in the process. But applied to corn and potatoes in the spring, it enriches these crops by its grosser and more volatile particles, loses its noxious seeds, undergoes fermentation, and becomes by the preparation for the wheat crop, intimately mixed and incorporated with the soil. I harrow down the crowns of the corn hills with a heavy harrow, plough, sow and harrow the seed by passing the harrow both ways.

I think you have remarked, that wheat will not grow in old soils which do not contain lime. I do not doubt but calcareous matter is essential in a good wheat soil. In Europe, it is applied to a great extent, in the form of lime, marl and chalk; and I trust we shall soon become familiar with the use of the two former. It cannot be too often mentioned that clay marls generally abound in sand districts, of no great depth, as if to incite the research and industry of man; and that they constitute the best dressing for the soils which cover them.

3. *Turnips.* These constitute an excellent preparatory crop to barley, as they leave the ground clean and mellow. But how is the crop to be consumed, it will be asked. If near a populous town or village, they will find a ready sale. If not, they may be fed on the ground during all October, November, and part of December, to sheep and cattle. And lastly, they may be buried in pits, like the Swedish turnip, and fed in the spring, when stock are much in want of succulent food. All I raise are taken to market from the field. The best crops which I have ever seen, were taken upon wheat and rye stubbles. Sandy loams are the best turnip soils.

4. *Barley* grows best on sand loams; and on those is more productive and profitable than oats or rye; and the demand for it is likely to increase with the multiplication of our breweries. It is recommended to roll the crop when three or four inches high. The operation induces the plants to throw up additional shoots, and facilitates the growth of the young grasses.

5. *Clover.* Upon this head I have nothing to say, except to reiterate your recommendation from Anderson, that when made into hay, clover should not be spread from the swath, and but slightly from the cock. It is worth 30 per cent. more, when dried in swath and small cocks, than when spread to an intense sun. If intended to stand more than one year, I sow orchard, tall oat, or timothy grass seed with clover. I prefer the two former on account of their early maturity for the scythe.

6. *Ruta Baga.* The value of this plant has lately been subjected to so full a discussion, that I will barely remark, that I have grown it five

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* *Young.*

* *Ratcliff's Flemish Husbandry.*

years, and am confirmed in the utility of its culture.

Without investigating the physiology of plants, it is enough for the present to observe, that they are furnished with different systems of roots, through which the plants are principally supplied with nourishment; that some of these search for food near the surface, and that others penetrate for it deep in the soil; that some render the soil hard and compact—others loose and friable;—that some plants exhaust the soil, while others fertilize it; and that the object of a rotation is, to make such a selection from different classes, as shall produce the greatest profit to the cultivator, without impoverishing his soil. How far the course I have adopted is calculated to attain this end, I leave for the public to determine. J. BUEL.

TO THE EDITOR OF THE AMERICAN FARMER.

AGRICULTURAL EXHIBITION—AT WASHINGTON, PENNSYLVANIA.

Dear Sir,

I was much disappointed on learning that indisposition had prevented you crossing the mountains in October last—I had understood from your friend, Judge W——, that he expected you in Pittsburg. He would have accompanied you to this place, to witness our agricultural exhibition. I anticipated no small degree of pleasure, by surprising you with an exhibition far beyond what you would be led to expect in our Backwoods.*

It cannot be expected that you should be able to publish the detailed account of all the exhibitions in our country. Should you, however, find room, we should be pleased to see this sketch of ours in the Farmer.

The show of animals far surpassed the expectations of the most sanguine members of the association. Twenty-eight stallions, 26 brood mares, 10 colts, 9 bulls, 80 head of cows, heifers, and calves, 23 full blooded merino bucks, 132 full blooded ewes, and 50 lambs were entered, and on the ground. The show of hogs was but small. Several of the stallions were handsome—none of them first rate. Where we had high blood and fine figure, they wanted size. Many of the brood mares were fine; combining both size and form. Some of the colts very promising. The bulls did not come quite up to our expectations—with two or three exceptions, they were barely passable. The cows and calves excited universal admiration An old English farmer who happened to be present, declared he had rarely ever seen a better collection of cattle. It is but justice to remark that almost every animal, of the cow kind, on the ground, could be traced back to some fine stock, brought into this country about fifteen years ago, by the late William Hoge, Esq. they were then known by the name of the "O'Donnell breed." During the last summer, I was repeatedly an eye witness to sixteen quarts of my rich milk being taken from one of these cows at one milking. The sheep exhibited were only distinguishable for the fineness of their fleeces. They are mostly sprung from the flock of William R. Deckenson, Esq. of Stubenville. His flock at this time is believed not to be surpassed by any in the United States.

We had entered on our list no less than 121 separate articles of domestic manufacture. The leading ones were woollen cloths, carpeting, blankets, flannels, casinets, plaids, table linens, plain linens and drilling. Most of these articles were substantial, and some of them excellent. The linen would not have disgraced the looms of old Ireland. A spear grass bonnet made by a Miss McLelland, was much and justly admired. It bore comparison with a real Leghorn, No. 51. In our wheat crops we were rather disappointed—forty and a half bushels took the first premium. The applicants for corn had 108, 114, 118, 123, 127, and 132.

Enoch Wright, Esq. took the highest premium for the "best cultivated farm," twenty dollars. This I should consider more honourable to obtain than any granted by the society.

Although the weather was wet and unfavourable, the very numerous concourse of persons who attended on both days, evinces the lively interest that is felt by the great mass of our population in the success of our society. The astonishing improvement that has taken place since its organization has convinced the most credulous, of the solid and permanent advantages arising from these associations, when pursued with spirit and on liberal principles.

I forgot to notice in its proper place, that Mr. Moore produced satisfactory evidence, that his family had manufactured during the last year, 603 yards of cloth—linsey, flannel and linen, amounting in value, to four hundred and seventy-three dollars—for which he got a premium of ten dollars—(very deservedly.)

NATURAL HISTORY.—No. 5.

(Continued from page 268.)

3. *Periodical Migration.*—Quadrupeds in general, from their limited power of locomotion, cannot migrate from one country to another, with ease and safety, in order to avoid the variations of temperature which accompany the changes of the seasons. In the same country partial migrations may take place, as we witness in the stag and the roe, which leave the alpine regions at the approach of winter, and seek protection in the more sheltered plains. In America some species of the genus *Dipus* perform still more extentive migrations. Those quadrupeds, however, which have the faculty of flying, as the bats, or swimming, as the seals and whales, may overcome the obstacles which oppose a change of place, and execute safely periodical migrations. Individuals of these tribes are accordingly observed to avoid the extremes of heat and cold, by shifting their situations according to the seasons. The great bat *(Vespertilio noctula)*, which inhabits England during the summer, is known to spend its winters in a torpid state in Italy. The Greenland seal forsakes the icy shores which it has frequented during summer, and migrates southwards, at the approach of winter, to Iceland.

The facts which have been ascertained in reference to the periodical migration of quadrupeds, are too few for enabling us to point out the laws by which they are regulated. The movements of birds, however, furnish more interesting results.

The migrations of the feathered tribes have been the object of popular observation, since the days of the prophet Jeremiah: "For the stork in the heaven knoweth her appointed times; and the turtle, and the crane, and the swallow, observe the time of their coming." (ch. viii. ver. 7). The systematical naturalists have likewise collected many scattered observations, and the subject appears now to be capable of receiving a satisfactory illustratien. It is not our intention to enter into any minuteness of detail, regarding the migrations of particular species, but to ascertain the *laws* of migration, and the circumstances under which it takes place.

Before entering farther upon the subject, it may be proper to state, that the same species which is migratory in one country, is in some cases stationary in another; as the linnet, which is migratory in Greenland, but stationary in Britain. In Britain, both male and female chaffinches are stationary, while in Sweden, the latter are migratory. Some species of the same natural genus are migratory, while others are stationary. Thus the fieldfare is migratory, while the blackbird is permanently resident.

Migrating birds may be divided into two classes, from the different seasons of the year in which they arrive or depart. To the first class will belong those birds which arrive in this country in the spring, and depart from it in autumn, and are termed *Summer Birds of Passage.* The second will include those which arrive in autumn, and depart in spring, and are called *Winter Birds of Passage.*

The Summer Birds of Passage are not confined to any particular order or tribe; nor are they distinguished by similarity of habits. Some of them belong to the division of *Water Fowls*, as the terns and gulls; while others are *Land Birds*, as the swallow and corn-crake. They differ also remarkably with regard to their food. Thus, the hobby is carnivorous; the gulls and terns, piscivorous; the swallow, insectivorous; and the turtle dove and the quail, granivorous. They, however, present one point of resemblance. All of them, during the residence in this country, perform the important offices of pairing, incubation, and rearing their young; and hence may, with propriety, be termed the natives of the country. We hail their arrival as the harbingers of spring, and feel the blank which they leave on their departure, although it is in some measure supplied by another colony of the feathered race, who come to spend with us the dreary months of winter.

The Winter Birds of Passage have more points of resemblance among themselves than those of the former division. They chiefly belong to the tribe of water fowls. None of them are insectivorous, and very few are granivorous. They chiefly frequent the creeks and sheltered bays of the sea, and the inland lakes, or they obtain their food in marshy grounds, or at the margins of springs. When the rigours of the season are over, and when other birds which are stationary are preparing for incubation, these take their departure, to be again succeeded by our summer visitants.

We have stated generally, that our summer and winter birds of passage visit us at stated seasons of the year; that the summer visitants arrive in spring and depart in autumn; and that the winter visitants arrive in autumn and depart in spring. But the different species do not all observe the same periods of arrival and departure. Thus, among the summer birds of passage, the wheat-ear always precedes the swallow, while the swallow arrives before the martin, and the martin before the corncrake. Among the winter birds of passage, similar differences in the time of arrival are observable. Thus the woodcock precedes the fieldfare and the fieldfare the redwing. The periods of departure have not been observed with such attention, as the subjects have then lost their novelty, so that we do not readily perceive their absence. It is probable, however, that in their departure, as well as their arrival, each species has its particular period.

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* Nothing, truly, could have been more gratifying than the meeting of friends on such an occasion, in a country comparatively new, rich and flourishing. If our friends in the West, have not yet put in practice all the *refinements*, in practical husbandry, their exhibitions certainly excel in the display of things solid and useful—many which have been held in older settlements on this side the mountains. The foregoing sketch, condensed, but comprehensive as it is, gives a gratifying view of the extent of agricultural intelligence, and the rapid progress of improvements which invariably result from the *association* of industry, talent, and enterprise, for common benefit.

Edit. Am. Far.

The periods of arrival and departure, even in the same species, do not always take place at exactly the same day, or even month of the year. In different years these vary several weeks or even months, and evidently depend on very obvious circumstances. The meanest rustic, in regard to the summer birds of passage, is aware, that cold weather prevents the arrival of these messengers of spring; and that the early arrival of our winter birds of passage indicates a proportionally early winter. The same circumstances of temperature which retard our summer visitants also check the progress of vegetation. Hence, in all probability, we might be able to prognosticate the arrival of these birds, by attending to the time of the leafing or flowering of particular trees or plants. As the state of vegetation depends on the temperature of the season, and the life of insects on the state of vegetation, we may safely conclude, that the movements of the phytivorous and insectivorous birds must be dependent on the condition of plants.

Linnæus bestowed some attention on these connected circumstances, in his Calendar of Flora for Sweden; and Stillingfleet in that of England. Linnæus observed, that the swallow returned to Sweden when the bird-cherry came into leaf, and when the wood-anemone flowered. He also found the arrival of the nightingale accompanied with the leafing of the elm. Stillingfleet says, that the swallow returns to Norfolk with the leafing of the hazel, and the nightingale with the leafing of the sycamore. It has also been observed, that the cuckoo sings when the marsh marigold blows. It would tend greatly to increase our knowledge of this subject, were observations of this sort multiplied. We earnestly recommend the subject to the attention of the practical naturalist.

Having thus offered a few observations on the periods of arrival and departure of migrating birds, let us now enquire after *the places from whence they come, and to which they return.* In doing this, it will be proper to bestow some attention on the migration of those birds which merely shift from one part of the island to another. The movements of such birds, though confined within narrow bounds, are probably regulated by the same laws, which, in the other species, produce more extensive migrations, and have the obvious advantage of being easily investigated.

In the inland districts of Scotland, the lapwings make their appearance about the end of February or the beginning of March, and, after fulfilling the purposes of incubation, hasten to the sea-shore, there to spend the winter, and to support themselves by picking up the small crustacea from among the rejectamenta of the sea. These birds seldom, however, remain all winter on the Scottish shores, though they are always to be found at that season on the southern English shores. In that part of the island they do not perform such extensive migrations, but may with propriety be considered as resident birds. The curlew arrives at the inland districts along with the lapwing, and departs in company about the beginning of August. The curlew, however, remains, on the Scottish shores during the winter. The oyster-catcher, though it breeds in Scotland, retires to the English shores during the winter, and joins those which have remained there during the breeding season. The black headed gull breeds both in England and Scotland; but it retires from the last mentioned country, while it continues resident in the former.

From the examples quoted, it appears that some birds, which are stationary in one district, are migratory in another. But that which chiefly merits our consideration is the circumstance of those birds, whose annual migrations are confined to our own shores, forsaking the high grounds on the decline of summer, and seeking for protection at a lower level, and in a warmer situation. When these migrations become more extensive, the bleak moors and shores of Scotland are exchanged for the warmer and more genial climate of England. Hence it happens, that some of our Scottish summer visitants come from England, while some of the English winter visitants come from Scotland; the summer birds of passage coming from the south, and the winter passengers from the north. Do those birds that perform more extensive migrations obey the same laws?

As the summer birds of passage are more interesting to us, since they perform the great work of incubation in our country, than the winter birds of passage, which are the harbingers of storms and cold, and only wait the return of spring to take their leave of us, we shall endeavour to find out the winter residence of the former, before we attempt to discover the summer haunts of the latter. Natural history, it is true, is still in too imperfect a state, to enable us to point out with certainty the retreats of all those birds which visit us during summer. But enough appears to be known to enable us to ascertain the laws by which these migrations are regulated in a number of birds; and as the points of resemblance in the movements of the whole are numerous, we can reason from analogy on safer grounds with regard to the remainder.

(To be continued.)

ADVICE TO YOUNG FARMERS.

ON THE APPELATIVES, QUALITIES, HABITS AND DEFECTS OF HORSES.

(Continued from No. 34, page 267, Vol. 5.)

As for the size of horses, perhaps sixteen hands ought to be the extreme, for whatever purpose, either of saddle or draught. I believe, on the strength of my own experience, and what I more respect, the opinions of men who have had the longest and greatest practice, that all possible advantages may be concentred within that compass, and numberless disadvantages resulting from over-size, avoided. It has been said, that "a great, good horse, will beat a little one;" and there is no doubt, but where the goodness, in all points, is equal, the largest must be the best; but we generally find, in all animals, that as they advance beyond the usual standard, they lose in symmetry and proportion as they gain in bulk. It is rare to see a man, of six feet high, well shaped. Among horses, perhaps, the smallest size, or ponies, are upon the average, of the truest make. The Latins say, *Inest sua gratia parvis*—what is little, is pretty.

A hunter, or charger, should be between fifteen hands, and fifteen three. It is obvious, that in the field, low horses can never clear their leaps so well, or carry a man so gallantly over the country, as those of a commanding size.—The most advantageous height of a hack, is between fourteen and fifteen hands one inch. A lady's horse, either for road or field, should never exceed fifteen. The convenience of ponies and galloways, for the summer season, and their inconvenience, in deep roads and dirty weather, are in the way of every body's observation.

It is a truth, like numberless others, much better known than practised, that horses should never be put to severe labour whilst young. Our doing so much violence to their strength, in this country, whilst their sinews are yet too flexible and tender, and have not acquired due substance and tensity, is the occasion of their growing old so soon, and becoming at such a premature period of their lives, totally unfit for any, but the lowest drudgery. We have had some instances of horses reaching forty years of age, but thirty seems to be, in general their latest period; and it may be compared to the human date of three-score and ten. As man is in the flower of his strength, from thirty-five to forty years of age; by a parity of reasoning, our horses would be in the highest state of perfection, for strength, toughness, vigour, and expertness at their business, from ten to fifteen, were we honest and humane enough, to allow them the fair chances of existence. That such theory will not treacherously abandon us in practice, as is too often the case, I have reason to be convinced, from some pleasing experiments of my own, and from the observation of those of other people. What a happy plan, where we can make humanity and interest coincide—but they do not always coincide! What a saving to individuals, and the country at large, to double almost the period of service in that vast number of our horses, which are now prematurely torn to pieces, and destroyed. I shall embrace every opportunity which presents, in the course of this work, to point out the means most conducive to this desirable end.

Horses for slow-draft (the least injurious of all their labour) may be put to gentle work, in careful hands, even at two years old, without sustaining any injury; and it is the custom of the country: but great care ought to be taken, never to put them upon long and heavy jobs, or subject them to heats and colds, and piercing winds; and, in particular, not to strain them at dead pulls; for amongst an infinity of accidents, to which, in that green age, they are liable, hurts in the loins are to be apprehended, from which they never after recover. Every body will tell you that road-horses and hunters should not be worked until five years old; and it is most true: the latter, indeed, ought not to endure many severe runs, the first season. But it is not enough, that young horses are not worked hard; that is to say, ridden fast, or long journeys; for whatever bone they may have, no high weight ought to come upon their backs, until they have attained, at least, five years' growth. From the improvident custom of over-weighting them too early, even if they are ridden slow, arise windgalls, splents, spavins, weakness of the joints, and that common tribe of defects, which are the consequence of over-stretched ligaments.

The English have been ridiculed by foreigners, for "making curtails," both upon their kings and their horses. As to those made upon the latter, I think there can be no doubt of the utility. Long tails, for which some people are such warm advocates, setting aside the incommodity to the rider, of being fanned by them, dirty or clean, do not in their appearance convey that idea of expedition upon which our affections are so bent in this country; buckled up, they to be sure have the air *militaire*, but do not look sportsman like, which is our mark. A horse will carry even a better full tail (a long one I mean) for having been docked; and it is an old opinion, which carries a shew of reason with it, that by abridging the tails, you strengthen the loins of horses. As what I have to say upon the tails of horses, is of a general nature, I may as well say it in this place, and have done with it. It has ever been my favourite study, when leisure was permitted me, to endeavour by all feasible means, to lessen the miseries of animals, and it is true, this principle has often forced me to turn executioner. I had heard of many accidents, some of them fatal, from horses being docked at too late a period, and by bungling blacksmiths; and indeed I had seen several operations of the kind, which made me sick. It occurred to me, that colts ought to be docked early, whilst the tail is tender and grisley; which operation I ever afterwards performed, upon my own, myself, with a good sharp kitchen knife, with all possible success, and which I wish to recommend as a general custom. The two last I docked, were, one about three months, the other about three weeks old; the one got by a cart, the other by a bred horse. These colts were perfectly tame and handy, a state in which I always chuse to have them, and whilst eating a few carrots, they suffered me to tie their hair up *secundum artem*, and to make the stroke, which curtailed them in an instant; and with so little pain, that they scarcely left their carrots. The usual quantity taken off, agrees in length with the width of a man's hand; but perhaps it ought to be rather more from the consideration of its being done so early. The bred colt was so indifferent about the matter, that he suffered me, about half an hour afterwards, to lay hold of his tail again, and make a ligature to stop the blood. If a flux of blood be not desired, a ligature may be made, previously to the operation: but in case of plethora, dulness, or heaviness about the head and eyes, it may be presumed that bleeding will benefit the colt, and the wound may be entirely neglected. If any application be thought necessary, nothing is so proper as French brandy. No twitching, trammelling, searing with hot irons, nor any of the barbarous Vulcanian apparatus, is here required; and what will weigh more than all the rest, with certain of my readers—no farrier's bill. *(To be continued.)*

TO THE EDITOR OF THE AMERICAN FARMER.

HORSE POWER—What does it mean?

Dear Sir,

There is a vast advantage in clear and definite ideas. Indeed nothing useful is to be accomplished without them. We hear every day of steam boats—of machines—of engines—*of so many horses power.* We meet with a steam engine in this place of so much power—with one in another place, of 50 per cent. more power—of another in a third place, of double the power of the first—and all called a twenty horse power. This leads to, and keeps up great confusion in all the talkers on this subject—but what is much worse, it engenders disputes, and bad feelings, and animosities between purchasers and makers of engines

Is there any real and fixed standard in this matter? Do have the goodness to request some one of your intelligent correspondents to state clearly the facts. How do you try the power of a horse? How many pounds weight, and in what position; and under what precise circumstances, is any force considered equal to the average power of the horse? A. B.

ANSWER TO THE ABOVE FROM ONE OF OUR MUCH ESTEEMED CORRESPONDENTS.

Sir,

The term "*Horse Power*," is much more generally used than understood. The consequences is, that impositions are frequently practised, by designing men, who puff off their machines, as possessing energy far beyond their actual power.

When any animal moves at its greatest speed, it overcomes no resistance, except what results from its own weight; and consequently, in that case, produces no *useful effect.* If it be resisted by a force equal to its strength, no motion will ensue; and of course, no useful effect be produced. It is then at what is vulgarly called, "a dead pull." Between these extremes, an endless variety of cases may be assumed, in which the animal will overcome any assigned resistance less than its whole strength, and move with a determinate velocity; but which will be diminished in proportion as the resistance is augmented. The question then, is, from having given the greatest velocity of an animal, when moving without resistance, and also the greatest resistance it can counteract, without moving, to determine the velocity with which it should move, and the resistance it should overcome, so that the useful effect may be the greatest possible: or, which amounts to the same, that the velocity with which the animal moves, multiplied into the quantity of resistance overcome, shall be the greatest possible?

Mathematicians demonstrate, and experience proves that when the animal moves with one third of its greatest velocity, without resistance, and overcomes a resistance which is four-ninths of the greatest it can sustain at a dead pull, the useful effect will be the greatest possible. For if either the resistance or velocity be increased beyond those quantities, the other must be diminished in a greater proportion, or else the animal will not be able to continue the action, during the usual hours of daily labour. But examples explain things best.

If a man can just counteract the force of 60 lbs. suspended vertically, by means of a rope, passing over a pulley, and drawn horizontally, at the height of his breast; and if he can walk at the rate of six feet per second, when unresisted; then will the third of six, or two feet per second, (that is one and five-elevenths of a mile per hour,) be the velocity with which he must move, and four-ninths of 60, or 27 lbs. nearly, the resistance he will overcome, when he produces the greatest useful effect—and if we multiply the velocity (2) by the resistance (27) overcome, the result, 54, will be the numeral measure of such a man's power, when exerted in drawing horizontally.

Again, suppose 420 lbs. to be the weight which a stout draught horse can just counteract, when suspended as above, and connected to his collar in the usual way; and that twelve feet per second is his greatest rate of walking when unimpeded; then, according to the above rule, four feet per second, (or two and ten-eleventh miles per hour) will be his rate of moving, and four-ninths of 420, or 187 lbs. nearly, his draught, when the useful effect is the greatest: and consequently, 4 times 187, or 748 will be the measure of one horse power But we have just seen that 54 is the measure of one man's power, in like circumstances; and 54 being contained nearly 14 times in 748, indicates, that one horse drawing horizontally, is equal to 14 men. Here we may observe, that at a dead pull, seven men would be equivalent to one horse; (for 7 times 60 is 420) but as we suppose the speed of the horse to be double that of the man, it will require double the number, to produce the same useful effect.

Since the number 748 expresses the power of one horse for one second of time; 60 times the same, or 44,8800 will express his power for one minute. But on account of friction and other obstacles, let us, with Mr. Watt, take the round number 44,000, for the measure; and this multiplied by 600, the minutes in 10 hours, will give 26,400,000, for the measure of one horse power, during a working day. Let us now compare our horse power with that of a steam engine.

We are told that a hundred weight of coals burned in a steam engine, will raise 20,000 cubic feet of water, 24 feet high. Now, a cubic foot of water weighs 62 1-2 lbs.; and, therefore, 20,000, must weigh 1,250,000 lbs.—This multiplied by 24, the height to which it is raised, gives 30,000,000, for the measure of the effect produced; which being divided by 264,000,000, gives eleven and four-elevenths. Hence it appears that 112 lbs. of coals, would, in such an engine, be equivalent to more than eleven days labour of one horse.

Thus it appears, that if the weight in pounds, which any agent can raise in one second, be multiplied into the height, in feet, through which it is raised, and the product divided by 734;—or if the weight raised in one minute, be multiplied into the height, and divided by 44,000, the quotient, in either case, will express the number of horse power, to which that agent is equivalent. And if the whole weight raised be multiplied into the height, and divided by 26,400,000, the quotient will express the number of days labour of a draught horse, capable of producing the same effect.

Your's &c.

J. D. C.

TO THE EDITOR OF THE AMERICAN FARMER.

December, 27, 1823.

THRASHING MACHINE.

Dear Sir,

Useful machinery is increasing among us—and that adapted to agricultural purposes, it is believed, notwithstanding the wonders in the world of steam, must continue to depend chiefly on the impetus received from the animal fibre—from bone, muscle and sinew.—There are various ways of applying a horse to a machine; and, no doubt, with different degrees of advantage. The most common is to hook the singletree to the end of a sweep, or lever, passing through the shaft of the main wheel. You often see a horse with his withers between a fork, or a gothick arch, descending from the end of a lever, or the rim of a wheel. Sometimes you see him mounted high upon the top of a verticle wheel, his forefeet moving down hill, or on a level, and his hinder feet climbing up hill. Sometimes he is placed upon a platform, framed to the main wheel, either horizontal, or at various angles of inclination.—Thus making him step, as the platform turns under him, either horizontally, or constantly up hill. I have once seen a poor devil fixed inside of a verticle wheel, and one, not of large diameter either, continually loosing the power of his hinder feet, from pushing against a curve, receding upwards, and constantly clawing up hill, with his fore feet. Every muscle, and sinew, and nerve of the poor devil was on the strain—even to look at him, put me in agony, and I thought the person, who forced him to work thus, deserved the rack.

It is of much, and real consequence to farmers, particularly, sir, to have a clear and intelligible statement, and if practicable, demonstration, *of the mode of applying the power of a horse, with the greatest efficiency to a machine.* I once heard a gentleman say he had a machine, which had long been smart labour for six mules, attached in the first described mode—that he had so altered his fixes, as to place three animals on an inclined plane, how, or at what angle of inclination I know not, but that the three kept his machine in full operation, with much less exertion and fatigue, than the six had suffered in the first mode, here is a secret certainly worth knowing.

Will you have the goodness to endeavour to elicit the *experience* of practical men on this subject. The statement to be really useful, should be full and precise, that any goed carpenter could work by its directions. The information desired is, *the mode of applying the power of one or more horses to machinery with the greatest efficiency.*

A SUBSCRIBER.

* * *

Lands being exempted from liability for debt, would favour improvements—lessen ruinous credits—check nefurious speculations, and promote the moral and monied interests of the community.

[A pamphlet, on various subjects of state policy, addressed to the Hon. Alfred Moore, Speaker of the House of Commons of North Carolina, of which the following is an extract, is attributed to the pen of Judge Murphy, the father of the extensive plans of internal improvement, now progressing in that state. The idea, that exempting lands from sale for debt, would increase the general wealth of the country, and the happiness of the community, was to me new; but when presented to me, I was instantly impressed with the justice and the importance of it. As intimately connected with agricultural improvements, this brief extract from the concluding part of the pamphlet is offered to the American Farmer.

A. B.]

The laws respecting creditor and debtor must be changed, otherwise the poor are destined forever to remain the slaves of the rich, the imprudent to be sacrificed by the cunning, and property to be the sport of nefarious speculation. We must abolish imprisonment for debt; we must exempt the soil of North-Carolina from liability for debt. Let not this change affect existing debts; let society prepare for the change; let the General Assembly fix a distant day, after which if debts be contracted, the creditor shall not look to the person of the debtor, nor to his lands, for satisfaction. And I would go further, and exempt the furniture of his house, a reasonable number of milch cows, of horses to cultivate his farm, his farming utensils, and provision for the support of his family for at least six months. What would be the consequences?

1. The poor would enjoy that equality in society, which the frame of our government promises to them, but which they have never yet enjoyed.

2. The poor class of the community would improve in their social and moral character; they would acquire a sentiment of independence, and cherish, love, and defend their country and its laws.

3. That vile speculation which fattens upon human misery would be in great part suppressed.

4. An effectual check would be given to that extensive system of credit, which is often as injurious to him who gives, as it is to him who receives it.

5. Men would be trusted for their honesty, and not for their property; and in this way, sound morality would be encouraged.

6 The agriculture of the state would improve rapidly: it will derive more encouragement from this change in our laws, than from all the bounties and premiums which the wealth of the state can give. A man will have some heart to build a good house, and to make a good plantation, when he knows, that let him be unfortunate or imprudent, his house and plantation will remain his own.

7. Emigration would be checked. The poor would become endeared to their native state, and not change their *certain* condition here, for an uncertain one elsewhere.

8. People from other states would emigrate to North-Carolina.

9. The value of our lands would greatly increase. This may be seen on the Virginia line; where a space of twenty feet makes a difference of one-half in the price of lands.

I love North-Carolina; she gave me birth! her soil covers the bones of my family; and I hope will cover mine. Let us honour her soil: let us render it sacred. Let it neither be taken in execution, nor charged with mortgages nor deeds of trust. Let us impose no restraint on its alienation, but declare it shall remain free from the pollution of debt. Blessed will be the day, when this shall be done! On that day shall the poor man hold up his head and none shall make him afraid; on that day shall the mother wipe the tears from her eyes, and gladness shall be in her heart; on that day will honesty and industry receive a new impulse, and love, respect and reverence for North-Carolina and her laws, be cherished by her people. May you and I, my dear sir, live to see that day! It will be a day of thanksgiving and rejoicing.

Your's,
A Citizen of Orange.
12th November, 1823.

* * *

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Sheppard's Inspection Warehouse, Baltimore, during the quarter, commencing on the first day of October, eighteen hundred and twenty-three, and ending on the first day of January, eighteen hundred and twenty-four.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	205	19	9	233
Number delivered.	205	35		240

LANCELOT WARFIELD, Inspector.

TREASURY OFFICE, ANNAPOLIS, Jan. 6, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Patterson's Inspection Warehouse, Baltimore, commencing on the eighteenth day of December, eighteen hundred and twenty-three, and ending on the first day of January, eighteen hundred and twenty-four.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	27			27
Number delivered.				

JAMES HOLLINGSHEAD, Inspector.

TREASURY OFFICE, ANNAPOLIS, Jan. 7, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md

A report of the tobacco inspected at and delivered from Dugan's Inspection Warehouse, during the quarter, commencing the first Monday in November, eighteen hundred and twenty-three, and ending the first Monday in January, eighteen hundred and twenty-four.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	80		10	90
Number delivered.	129	71		200

RICHARD WATERS, Inspector.

TREASURY OFFICE, ANNAPOLIS, Jan. 7, 1824.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

* * *

FROM POULSON'S AMERICAN DAILY ADVERTISER.

ECONOMY.

The following is the result of an experiment, actually made in order to acertain the comparative expense of oil, and candles. An ordinary Glass Lamp, with a flat wick half an inch in breadth, was placed beside a Mould Candle, of the size called sixes, and both allowed to burn 16½ hours without being moved. In that period of time 2 candles and 3-5 were consumed, and a fraction less than one third of a pint of oil. (A pint weighed 15¼ ounces, and the quantity consumed was 5 ounces.)

From the experiment, it appears that one gallon of oil will burn 402 hours and 3-5, and that it requires 10 and 3-5 pounds candles, to burn the same time, so that supposing oil to be 75 cents per gallon, it will be equal in expense to Mould Candles, at 7 cents per pound.

As oil may be purchased for less than 75 cents, and in the ordinary use of candles there is a considerable waste from their being moved, it is evident that the advantages on the side of oil are very great.

A HOUSEKEEPER.

TOOTH ACHE.

In consequence of having read an advertisement in the Federal Gazette a few evenings ago, respecting the discovery of a cure for the tooth ache, when produced by its decay, I was induced to obtain a small vial of the *Elixir of Acacia* and on applying a portion of it, through the medium of a small piece of cotton saturated and placed in the hollow of the tooth, an instantaneous relief was obtained. I can only attribute this wonderful and certain remedy for a most intensely distressing pain to the powerful antiscorbutic and antiscoptic qualities of the Elixir, and as such I earnestly recommend it to the attention of the suffering, being convinced from experience that the cure is certain and effectual.

ONE OF THE RELIEVED.

VEVAY WINE.

The present season has been unusually favorable to the culture of the grape, in the neighborhood of this place. About 5.500 gallons of wine have been made by six dressers.

Two situations appear to be particularly favorable for the culture and growth of the vine; one upon the margin of large rivers, and the other upon high elevated places. No part of the globe is better adapted to the culture of the vine, to produce the most exquisite wines, than the rich ground on the margin of the large western rivers—we are pleased to see the exertions made use of to increase the quality and quantity of wine in this neighborhood.—*Indiana Register.*

The Messrs. Schuyler's, of Troy, have in their possession a pig, of the grass breed, three years old, which weighs *twelve hundred and thirty-two pounds!* He measures nine feet in length, two feet five inches across the back, and round the girth seven feet two inches. If not sold this winter, this *pig* will be sent to New York in the spring.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 16, 1824.

MARYLAND AGRICULTURAL SOCIETY.

The monthly meeting of the Board of Trustees, held at the residence of GEN. R. G. HARPER, on Wednesday last, was well attended; and the affairs of the Society, with reference especially to future efforts and exhibitions were canvassed with an earnestness, and in a temper highly promising to the laudable objects of the institution. The memorial to the Legislature of the state, prepared by the President, at the instance of the Society, praying for an act of incorporation, and for pecuniary aid, was submitted, approved, and signed by the members present. The Committee appointed at a former meeting, to prepare a scheme of premiums to be awarded at the next exhibition, begged to be indulged until the next meeting of the Board, as it was found impracticable to come to a satisfactory decision in regard to various subjects; from the uncertainty of the amount of funds which may be at the disposal of the Trustees; depending, as that amount necessarily must do, on the disposition of individual contributors, and the liberality of the Legislature. In the mean time, that uncertainty will have been removed, as each member of the Board, as well as the President of the Society, the Treasurer, and the Recording and Corresponding Secretary will then make a final report of the amount of subscriptions, which each may have collected; and the disposition of the Legislature to grant something in aid of individual exertions for the most important branch of human industry, will have been ascertained by the fate of the proposed appeal to their munificence and good judgments.

In the mean time it is thought to be sufficient to state for present purposes, that besides the objects upon which premiums have been hitherto usually bestowed, the lists will be so extended as to embrace a much greater number and variety of articles than heretofore, particularly under the heads of—

CROPS of all the principal GRAINS and GRASSES—FRUITS, VEGETABLES, and FAMILY DOMESTIC MANUFACTURES, in all their useful varieties—with reference both to quantity, and to quality, as may suit the case.

Besides the premiums to be awarded by the Society, should the desired aid be procured from the Legislature, we are particularly gratified in having it in our power to state, that many gentlemen have concluded to offer *volunteer premiums* of useful pieces of plate, for certain objects to be designated by themselves.

The objects, as far as they have yet been indicated, which will thus attract the reward of private munificence, are

The best sketch of the Natural History of THE MULE, with a comparative estimate of the capacity, expense of keep, power of endurance, and length of life of that animal and THE HORSE, in reference to the general purposes and labours of a Maryland Farm.

For the BEST CULTIVATED FARM—with a view to clear profit on all the capital employed.

To the farmer who hauls out the GREATEST QUANTITY OF BARN YARD MANURE, in proportion to the force employed, and the number of stock advantageously kept.

To the WIFE of the Farmer, in whose family the GREATEST QUANTITY OF USEFUL FAMILY MANUFACTURES is fabricated in proportion to the number of females and children employed.

To the MANAGER of the farm, on which the GREATEST NUMBER OF DOMESTIC ANIMALS ARE REARED IN THE BEST CONDITION, and in proportion to the number of the breeding stock.

To the Farmer or Manager, who shears THE GREATEST QUANTITY OF WOOL, in proportion to the number of the flock, that being not less than twenty.

To the HOUSEWIFE under whose management there shall have been raised, to marketable size, the GREATEST NUMBER OF POULTRY, in propotion to the number of breeding fowls, that being not less than thirty of all sorts.

For a description of the cheapest and best method of REARING STOCK CALVES.

For an acre of the BEST FLAX.

The premiums given in these instances, will consist of silver pitchers, spoons, cans, &c. valued at from 10 to 20 and 30 dollars, in each case. We are not yet at liberty to mention the name, of the gentlemen, by whom they will be offererd and the object of this general sketch is, to advise other gentlemen, who will doubtless unite in setting to the community, and to other agricultural societies, an example so praiseworthy and patriotic, of the particular subjects already selected for distinction, by the offer of volunteer premiums.

Those inclined to draw attention to, and to promote improvement in any branch of industry, or item of rural or domestic economy, by proffering a special reward in any amount, will please signify their willingness to do so, to J. S. SKINNER, Corresponding Secretary of the society, before the next meeting of the Board.

At 3 o'clock, the Trustees having finished the consideration of the specific business before them were invited to follow their Host to the dining room, where agriculture in all its branches, with the lights shed upon it by modern science, and the savings of time and labour, accomplished by modern improvements in the implements, and the practice of the art, continued to be the favorite, and the animating theme of conversation.

The Trustees finally adjourned to hold their next monthly meeting at the residence of RICHARD CATON, Esq, at 11 o'clock, A M. on Wednesday the 11th of February—a punctual attendance at that hour, of all the Trustees is particularly requested, as the scheme of premiums will then be submitted, and each particular discussed; and, as finally approved, will be forthwith published for the information of the publick.

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☞ A letter from Dr..S. McCulloh to Joseph Pope, Jr. in relation to Pope's Threshing Machine, will appear in our next.

* * *

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

The state of the market enables us to vary our quotations a little this week, and we give the wholesale prices of the following articles:—Wharf flour, $5 37½ to $5 50—Western country do, from the wagons, $5 62½—Fine do. $5 12½—Whiskey, including the barrel 28 cts.—Wheat, white, $1 10 to $1 20—Red do. $1 05 to $1 10—Corn, 34 to 35 cts.—Rye, 43 cts.—Hides, dried, 16 to 20 cts.—Iron, pig, per ton, $35 to $40—Country bar, $90 to $95—Sheet, $160 to $180—Lime, bushel, 30 to 33 cts.—Leather, soal, best 24 to 27 cts.—do. Eastern tan, 18 to 20 cts.—Coal, Virginia, 20 to 25 cts. per bushel—Susquehannah do. per ton, $20 to $25—Feathers, 35 cts.—Herrings, Susquehannah, $2 75—Gunpowder, 25 lbs $5 to $5 50—Baltimore manufacture, do. $5—Shot, all sizes, per cwt. $8 50—Beef, northern mess, $10—Cargo, No. 1, $8 to $8 50—No. 2, $6—Baltimore prime, do. 10—Cotton, Louisiana, 16 to 17 cts.—Georgia upland, 14 to 16 cts.—Alabama, do. 12 to 13 cts.—Cotton yarn, No. 8, 30 cts., with an advance of 1 cent each No. to No. 18—Candles, mould, 12 to 13 cts.—Dipped do. 10 to 11 cts.—Spermaciti, do. 25 cts.—Hops, fresh, 35 to 40 cts.—Tar, barrel, $1 75—Pitch, $2—Turpentine soft, $2 50—Rosin, soft, $1 50—Beeswax, 30 cts.—Wool, cleaned and assorted, 15 to 20 cts. advance—Merino, full blood, 35 to 40 cts.—Crossed, 28 to 30 cts.—Common country, 20 to 28 cts.

TOBACCO.—A few unimportant sales the last week, and our quotations remain the same as last report.

FOR SALE,

The whole of a Dairy Stock of Cattle, consisting of an Alderney Bull, full bred, and several half bloods, of the Alderney and Devon blood. As the gentleman who offers these cattle, is breaking up the establishment, he will sell them very low, viz

The full bred Alderney Bull, calved in Baltimore county, five months after the landing of the mother, $100.

Eight three years, two years, and one year old cows and heifers—each $30.

These cattle, if offered for sale in England, would probably fetch double the price asked for them here; and the Bull is offered at one half the price the Alderney Bulls sold for when imported.

I offer also for sale, two Bulls, half Devon and half Alderney, three and four years old—the price is sixty dollars each.

I can accommodate any gentleman with three quarter blooded Bulls and Heifers, of the Devon breed, at thirty dollars for each female, and twenty dollars for each male calf, at two monts old; or fifty dollars for each female, and forty for each male yearling.

I have for sale the full blooded Stud Horse, *Top Gallant*, five years old.

Enquire of the Editor of the American Farmer.
Baltimore, January 10th, 1824.

PIGS FOR SALE.

Farmers who are desirous of improving their breed of Hogs, may purchase from a litter of pigs, obtained this season, from the brood Sow, which took the first premium at the last Maryland Cattle Show. There can be had, five Boars and five Sows, on application to Mr. J. W. Stone, proprietor of the Stone Tavern, at the two mile stone, on the Frederick Turnpike road.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore

AGRICULTURE.

ADVICE TO YOUNG FARMERS.

On the appelatives, qualities, habits and defects of horses.

(Continued from No. 43, page 342, Vol. 5.)

For many years past, the people of this country, have wisely adhered to the natural *paces* of the horse, which are *walk*, *trot canter* and *gallop*. The *canter* is a natural pace, although many horses require to be taught, as is obvious, from colts of a few weeks old performing it in a handsome manner. In former days, when factitious principles of all kinds were in vogue, and were held so indispensable; and when the studies of men seemed to be directed to an inversion of the order of nature, in so many respects; they did not forget to supplant her in the motions of their horses, by forcing them into artificial paces—Thus Markham, and the old writers, describe *pacing* and *racking*, which they took the pains to teach their horses by cruel and dangerous methods. These motions were a kind of mixture, or confusion of the natural paces, as may be conceived from the mode in which they were taught, namely, by forcing the horses to go with their legs tied. Racking, it seems, was that irregular run, between a trot and a gallop, which we often, at this time, observe a horse to fall into, when badly ridden, and of which many horses acquire the habit. Pacing was not entirely out of vogue in Bracken's days, and I have known one pacing-horse, within my own memory; they called him a natural padder, but his padding seemed to me to proceed either from some defect, or from bad riding.

In Normandy, Mr. Green informed us, a few years since, there are natural padders, which pace six miles per hour, so easily, that a man may ride seventy miles in a day without fatigue. It ought not I think, be St. Thomas's day. To excel he adds, they must be true bred padders, both from the horse and mare.

I shall defer awhile speaking farther of the paces, and proceed to the proper shape and qualifications of saddle-horses. And first, with respect to beauty in horses; strictly speaking, it is the necessary result of symmetry, and exact proportions; but nevertheless, many thorough-shaped horses are not accounted handsome; and more, which have a beautiful and gallant appearance, are far enough from being thoroughly well made. This requires no explanation. In this country, where speed is the first object, provided a horse be well made in the cardinal points, if I may be permitted that expression, or those parts most immediately contributory to action, beauty is taken for granted, by the knowing ones. Has he a large head? Well, he carries it himself; the question is, does he carry it fast, and in a good place? Is he a ragged hipped one? Never mind, he is well filletted.—Goose-rumped? What o'that, he rises well before, and is deep in the girt. There is, however, a very erroneous notion, which has been long current, but, most assuredly, is not sterling. It is said, that "horses of all shapes and makes may be goers." This verisimilitude has taken its rise, from horses of rough and unpleasing appearances, but in reality, possessing considerable extent in the most material parts, being often endowed with great powers of action. I have heard it was the saying of old Frampton, or old Bracken, or some other great judge, that "horses always go with their shoulders." In truth, no horse with a small, fleet, upright shoulder, was ever a goer. Goodness depends so far upon shape, that whenever you have obtained hack, hunter, or racer, right in the material points, you are sure of some qualification above the common run; you have got either extraordinary speed, or great powers of continuance; which will, again, materially depend upon animal temperament. The material points are, a deep and oblique shoulder, length, width in the quarters, and free course for the wind.

Flatness, and depth, are the basis, or principle of speed; but to produce strength, goodness, and beauty, substance is necessary. So to speak, rotundity, swelling over a deep and flat ground, forms the true shape of a nag; that is most apparent in the counter shoulder, and deep oval quarter.

A hack, or hunter, ought to be shaped, in all points, exactly like a race-horse, bating somewhat of his length; the abatement for the hunter, it is obvious, need not be so considerable.

As to the *defects* of horses, and *parts most liable to defect*, here follows a catalogue of the principal; which a man ought to have in his mind's eye, whilst about to make a purchase, more particularly, if unattended with warranty: viz.

Head ill set on, or too long, eyes, age, wolves teeth, bladders in the mouth, gigs, glanders, jogged under the jaw, hide-bound, broken wind, crib-biter or ticker. run-a-way, restiff, vicious, neck-reversed, or cock-thropelled, ewe or deer-necked, shoulder straight and heavy, chest narrow or wide, high on the leg, broken knees, round legs, grease, windgalls, sinews down, splent, oslet, speedy, cut, nock, mallenders, hurt in the joints, toes turned out or in, feet soft or hard, large, small, or deep, quitter, false quarter, ringbone, sand-crack, groggy, founder, thrushes, corns, high goer, daisey-cutter, forelow, shallow girth, hollow-backed, bream-backed, long backed, broken-backed or megrim, light carcase, bursten, ragged hipped, droop-arsed, dutch or round buttocks, hipshot, stiffled, lame in whirlbone, spavins bone and bog, curb, thoroughpin, capped hocks or houghboney, sallenders, sickle-hammed, cut behind, hammer and pinchers or over-reach, wrong-end first, string-halt.

A horse may be good with a large head, provided it shew symmetry, is joined to the neck with a curve, or is wide enough in the upper part of the jaw bones, to admit of being pulled in, without impeding respiration; otherwise, a heavy, fat head, forebodes dulness and distemper, particularly of the eyes. A long head occasions the horse to bear heavy upon the hand, however good his mouth may be, as soon as his flow of spirits is over. A head too short, as St. Bel observes, detracts from the equipoise of the body; it certainly detracts from the idea of proportion, as well as a too long one; and without alleging any particular inconveniences belonging to it, I think we seldom see a capital horse with a very short head.

The *eye* should be viewed in a good light, or rather in the sun-shine, the examiner standing in the shade. It ought to be bright and transparent, as it were, to the bottom, and free from haze, dulness, or cloud. The dull, or coal-black eye, or that encircled with a blue cloud are precarious. As to external conformation, the eye should be somewhat prominent, without being too full and large; the large glassy eye is always suspicious; as is also the small pig-eye. Thick, moist eye-lids denote a flux of humours. It is easy to distinguish external accidents, of the probable danger of which, it appertains to experience to determine.

It is said, Roman-nosed horses are generally stout and hardy. The term *stout*, in equestrian language, applies invariably to the courage, not the substance of the horse.

The *mouth*, to be perfect, ought to contain the bit handsomely, and well; and to be of such just temper, as to be able to bear considerable pressure with the snaffle, and yet be sensible of the least directing motion of the rider's hand: also, to be free of wolves teeth, namely, irregular ones, which may cut the tongue, gums, or inside of the lips, in mastication; of gigs and bladders, which get between the teeth; and the teeth themselves, untouched by art. I once purchased a mare, in very low condition which did not amend, although she did, or indeed was able to do, scarcely any work. She ate little, particularly of hay, which she was observed to take into her mouth, and drop out again, without being able to chew it. On a nearer inspection, it appeared, all her teeth had been filed down; and there is no doubt, but the miserable creature soon sunk under her work, for want of due sustenance. It was with regret, but I was obliged to part with her.

A discharge from the nostrils, even if it be somewhat thick, may be nothing more than a cold; but if it be attended with a swelling of the glands, under the throat, it indicates a disease of some standing, of which the consequence may be both trouble and danger. As to the Glanders, granting the discharge to have been suppressed by art, the disease is indicated by an over quantity of foam in the mouth, by swelling of the glands, and by the deadness of the hair, which will come off with the slightest pull of the fingers.

Broken Wind is discovered by the quick and irregular heaving of the flanks, and a more than ordinary dilatation of the nostrils; sometimes also, by a consumptive appearance of the body. But the usual method of trying the soundness of a horse's wind, is, to cough him; which is performed by pressing the uper part of the wind-pipe, with the finger and thumb. The strong, clear, and full tone of the cough, prove his wind to be sound; if, on the contrary, the note be short, whistling, and husky, the horse is asthmatic, and unsound.—Horses labouring under the worst stage of this disease, are styled, in the language of the repository, Roarers, from the noise they make in work, of very little of which they are capable. Broken-winded mares are generally barren, although I have heard of one, which bred a whole team of horses, after she became asthmatic. Some pursive and thick-winded horses are, of all others, the strongest, and most thorough-winded. They catch their wind with difficulty at first; but it comes more free and clear, as their action increases.

(To be continued.)

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"AGRICULTURAL SOCIETY OF THE VALLEY," of Shenandoah, Virginia.

From the Winch. Republican, of Nov. 15, 1823.

The first cattle show and fair of the Agricultural Society of the Valley was held in this town on Wednesday and Thursday last. It would be difficult to say whether the event exceeded or fell short of public expectation. The exhibition was certainly a respectable one; and when it is recollected that the weather had been extremely adverse for several days previous—that the state of the roads rendered the transportation of animals from the neighbourhood difficult, and from a distance next to impossible—that an unusual and lamentable sickness had deranged the purposes of almost every farmer in this and the neighbouring counties, and that indisposition still confined many members to their homes; add to this that the occasion was a novel and untried one, in which it was doubtful whether success or disappointment, pride or mortification would be its attendants—contingencies which of themselves would intimidate the bold and deter the timid; add these considerations together, and it may safely be said that the result is a matter of felicitation.

We regret that it has not been in the power of the secretary to furnish us with his minutes of the proceedings of the fair. Knowing the anxiety of our readers on the subject; we also regret that we can only present to them the following imperfect list of the premiums awarded, gathered from an unofficial source:

To Mr. Richard K. Mead, for the best farm,	$30 00
To Mr. Wm. M Barton, for the next best	20 00
To Mr. Amos Lupton, for the best two acres of corn,	10 00
To Mr. John W. Page, for the next best	5 00
To Mr. T. F. Nelson, for the best bull,	10 00
To Messrs. John Mackey and Wm. B Barton, for the two next best, each 5 dollars,	10 00
To Mr. Edward M'Guire, for the best milch cow,	10 00
To Mr. David Ridgeway, for the next best,	5 00
To Mr. Nathan Perkins, for the best boar,	8 00
To Mr. Thomas Cramer, for the best yoke of oxen,	10 00
To Mr. Aaron Hackney, for the next best,	5 00
To Mr. R. D. Glass, for the best brood mare and colt,	10 00
To Mr. Martin Cartmell, for the best barrel of flour,	2 50
To Mr. John Heiskell, for the best plough (Davis's)	5 00
To Mr. John W. Baylis, for the best piece of woollen cloth (less than the measure,)	3 00
To Mr. Amos Lupton, for the next best (full measure,)	4 00
To Messrs. Holmes & Ward, for the best blanketing,	6 00
To Mrs. John W. Baylis, for the best flannel,	6 00
To Mrs. Thomas B. Campbell, for the best carpeting,	6 00
To Mrs. Martin Cartmell, for the best butter,	5 00

Discretionary Premiums.

To Mr. John Heiskell, for corn,	5 00
To Mr. John Macky, for his specimen of stock,	5 00
To Mr. Isaac Christman, for his specimen of stock,	2 50
To Mrs. Judge Holmes, for a reticule made by herself of straw,	1 00
To Miss Brown, of Georgetown, D. C. for do. made by herself of cantelope seed,	1 00
To Mrs. Martha Barton, for a counterpane,	3 00
To. Miss Hines, for a counterpane,	3 00
To Miss Newman for a pair of stockings,	1 00
To Mr. Lysle Robinson, for a hearth rug,	2 50
To do. for blanketing,	2 00

[*The premiums awarded in plate.*]

[In the same paper we have read with much pleasure, a beautiful address from Wm. M. Barton, Esq. Vice President of the society, from which, not having room for the whole, we extract the following practical facts and suggestions, persuaded, that they will be found worthy the particular attention of our readers.]

Edit. Am. Farmer.

When I look around me, and discover many who have grown gray in the cultivation of the soil, and some too, who are known as practical and successful tillers; I can but with diffidence recommend many alterations in our system of farming. Though willing to admit that the young are too fond of novelty, yet I believe it is equally true that the old are too averse to innovation; they are either too tenacious of ancient customs, or look with too much suspicion and jealously on the efforts of the rising generation. One grand and prominent error in the agricultural system of Virginia—one which unfortunately bears the sanction of time and the authority of general adoption—is the practice of cultivating extensive farms. I am perfectly satisfied that if correct accounts of profit and loss were kept, it would be found that the proprietors of those unwieldy and unmanageable farms live less comfortably and realize infinitely less than those who concentrate the same labor and attention in one fourth the quantity of ground. You who are candid and who have kept regular accounts of your profits on farms of five or six hundred acres, will acknowledge that your clear gain rarely exceeds five hundred dollars per annum. Now, if you have in grass three fourths of such a sized farm, and from the remaining fourth make annually one thousand dollars, which I am sure ought to be done, is it not the best argument that can be offered in favor of such a curtailment? If you doubt the practicability of realizing so much from so small a quantity, I can only ask of you to suspend your opinions until proofs the most satisfactory can be produced of much larger sums being realized from a smaller quantity of ground. In Saratoga county, New York, there lives a Mr. Stimson, who made in the summer of 1821, two thousand bushels of merchantable corn from twenty acres of land, being an average of one hundred bushels per acre. Among many memoranda which were taken during an excursion to the north, (with the hope that this society could have gleaned from them some information worthy of notice) but two were preserved—the one noticing the extraordinary crop of corn raised by the Messrs. Pratt's, of New York, which is already in possession of the Secretary, and the other an imperfect sketch of the farm of Judge Buel, near the city of Albany. From the one last mentioned, I collect the facts now detailed. The farm of Mr. Buel contains eighty acres: the soil is principally silicious, nearly resembling the poor lands bordering our tide waters; the timber, a stinted pine, with thick undergrowth; the flat land, a wet cold soil in the hands of nature, barren and unproductive. For the last five years the average crop of corn on this farm has been fifteen barrels per acre; the average of wheat, twenty-five bushels; of potatoes, four hundred bushels; of ruta baga, or Swedish turnip, five hundred bushels; of mangle wurtzle, upwards of six hundred bushels; and of common American turnips, two hundred bushels. Mr. Buel sold the produce of forty acres of this poor land, in the summer of 1821, for fifteen hundred dollars. Although we must acknowledge that Mr. Stimson and Mr. Buel are among the best practical and most zealous and successful farmers of New York; yet when we are informed that the last mentioned gentleman cultivates land not superior in its natural condition to the poor pine hills of Frederick, from which he produces crops infinitely superior to those on our best lands; we are compelled to draw an inference most unfavorable to our system of farming and general management.

From some rough calculations which I have made, I suppose that on a large portion of the lands forming our eastern states, there are comfortably supported on each square mile, or six hundred and forty acres of land, from twelve to fifteen families. How frequently do we find that a single family subsists on the same quantity of land in Virginia with much difficulty. We can ascribe this difference to nothing more rationally than to superior skill in agriculture.

Although, gentlemen, of the society, I have already trespassed on your patience much longer than I intended, I cannot refrain from employing the present opportunity to recommend to you, in the strongest terms, the application of green crops as an enricher of your lands. The cost of applying a crop of oats in this way, will rarely exceed, under the most unfavorable circumstances, fifty cents per acre. It is impossible, without the fullest experiments, to say, what the gain may be; but in all human probability it will exceed ten times the cost. No one can for a moment apprehend the least injury to the soil from such an application. I trust, then, that none will, for the sake of saving a trifling expenditure, remain longer in doubt on so important a subject.

Let me also recommend the substitution, in some measure at least, of roots for corn, particularly as a food for milch cows, sheep and hogs.—There is no crop which we cultivate in this country so injurious to our lands; there is none which requires a more constant and uninterrupted attention; and, in fine, there is none which returns so small a profit to the farmer, as the corn crop. By a little superior cultivation, the product in roots of one acre will go as far as the corn gathered from ten. In the vicinity of Boston resides a Mr. Ingersoll, who has devoted his attention almost exclusively to a piggery, which he has established on a farm containing in all but eighteen acres; on one-third of this, which is the most he ever has in cultivation at one time, he cultivates roots of various kinds, the mangle wurtzle, however, being his favorite. From the produce of this six acres he raises and kills annually one hundred and sixty hogs, which have never averaged him less two hundred and fifty, weight each, making the enormous quantity of forty thousand pounds of pork annually. This pork is hardened with corn previous to killing, which he always obtains by the sale of his surplus manure. Then is Mr. Ingersoll realizing more by prudent management from eighteen acres of land, than is made by, with a few exceptions, any farmer in the county of Frederick.

Permit me once more, fellow-citizens, to invite and entreat you to join with us and aid in accomplishing what we have so auspiciously commenced. Rest assured, that, whatever your occupation may be, the surest guarantee to your success is the prosperity of the husbandman. Although in your various careers of honor and usefulness, *you* may prefer to tread the labyrinth of state—and *you* to hold converse with other worlds and to expatiate among the wonders of creation—and *you* to minister relief to bodily diseases—and *you* to cleanse the corruption of the heart, and shed the light of immortality o'er the gloom of the grave—and *you* to hold the scales of justice, or to wrest from destruction the violated law;—in all these diversified employments, your chief dependance is on the products of agricultural enterprise. Come, then, and walk into the fields with me, and contemplate nature robed in her own loveliness; abandon for a time the haunts of idleness and dissipation; relinquish the vain and unsatisfying enjoyments of crowded life; come into the country, inhale the pure atmosphere of rural peace and quiet, and taste the genuine sweets of rural philosophy.

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American Flannels—Considerable quantities of flannel will be made this year within 40 miles of Boston.—The New York Mercantile Advertiser says 30,000 pieces:—their authority, they tell us, is good.

FROM THE NEW ENGLAND FARMER.

HORTICULTURE.

The following articles are from a gentleman, who has added experimental to theoretical knowledge, in Horticulture, and has put in practice what he inculcates. We hope that those who cultivate small tracts of ground in the vicinity of large markets will give a particular attention to the subjects here discussed, and derive such advantages from the information contained in these Essays as we are sure will best meet the views of the writer.

Edit. N. E. Far.

1. I apprehend that too little is thought of successive crops the same year, perhaps little known of the practicability of raising them. Through almost the whole of a garden two crops may be raised, in considerable parts of them three, without either crop receiving any considerable injury by it, while the most will be essentially benefitted. And this may be effected with little if any additional expense of manure, especially if the land be dry and sandy. The reason why little if any more manure is required than for one crop, is that the ground is thereby covered, or shaded so much of the time that much less of the richness of the soil, and volatile parts of the manure are carried off by evaporation, or destroyed by chemical changes. I will mention a few successions as specimens for those who have not much ground to till; successions which have been virtually followed for several years with the most encouraging success. Between the hills of corn may be sowed, spinage, lettuce, cabbages, and things of a similar nature, all of which will be out of the way before the corn is sufficiently large to require the space they occupy. Then about midsummer, set out, or plant, in or between the hills of the same corn, French turnips, Ruta Baga, or English turnips, which after the corn is removed will have time to arrive to good perfection.

Between the hills of cucumbers, melons, &c. plant rows or hills of low peas, which will ripen before the vines run much. And as the vines decay set out cabbages or sow English turnips. When peas are sowed, which run upon sticks, raddishes may be raised; and as I mentioned in a former communication, parsnips, which will, in this way make the third crop.* Various other successions might be mentioned; these will serve as introductory, to those who are disposed to make the experiment. It may be proper to observe, that all this may be done on land not under the highest state of cultivation; but which is only in what may be called a good state. And by the way, I will observe that if persons wish to have their vegetables to possess a fine relish, and to be nourishing and healthy, they must never manure them to excess.†

2. Hot houses and hot beds in their proper and appropriate use are good things—away from this they are not to be tolerated. Their legitimate use is to secure the growth and perfection of those things, which in any particular climate could not be otherwise enjoyed. But when they are used to secure particular produce out of season, they diminish instead of increasing the means of good living. A person, for instance, who will take a little pains, may have his cellar filled, and his table ornamented with a great variety of fine fruit, and tasteful vegetables, and all in season in the month of January, at an expense not essentially differing from what it costs to secure a half dozen hot bed cucumbers, which nobody really wants at that season, and which nobody of uncorrupted taste would ever eat, were it not for the most ridiculous of all reasons, that they are *out of season.* The worst evil, however, is, that having them out of season, little pleasure is derived from them when in season, and when, prejudice to the contrary notwithstanding, they are a most pleasant and healthy refreshment. Every thing is beautiful and good in its season. Expense and labor should be directed to increase the number and enlarge the variety of such things as are good for food, and pleasant to the eye, but not in procuring out of season what God in his great goodness enables us by the warm interence of his own sun to have in great perfection. The sun and kindly influences of the heavens should be permitted to do what they are able to do. And with respect to what can be raised, our exertions should be directed to increasing the number and multiplying the variety, and bettering the quality of vegetable products, not in forcing them upon ourselves, when they are not really wanted, and when from their meagre appearance, had they sense, they would be ashamed to exhibit themselves on our tables.

WEEDS.

3. Were you not, Mr. Editor, acquainted with my little lot, I should not incline to write, what I am about to send you. But, you know my garden is not like the field of the sluggard, all grown over with weeds, though you know I view them in a light somewhat different from the generality of those, who delight in rural employment. That instead of considering them as evils only to be dreaded, I regard them as a kind provision of a wise and good Providence, designed not only as a wholesome food for many of his creatures, but also as a covering for the earth to secure it from the great heat of the Father of Day, when without any interruption he is permitted to pour his rays on its naked and mellow surface. Not to counteract the wisdom of the *Best*, my way is, after preparing the ground and putting in the seed to let the weeds spring up and grow, taking care only to keep them out of the rows and hills, and removing them as they interfere with the growth of vegetables By this means the earth is early shaded, and a quantity of food raised for swine or cattle surpassing what any person would at first imagine. And what, perhaps, will not till trial is made be readily assented to is, notwithstanding, true. If the experience of four years is sufficient to satisfy me in judging, a garden is kept in such a state as to have the vegetables grow well with less labor than it can by destroying the weeds as soon as they spring out of the ground. But while I would encourage the growth of weeds to protect the ground, and thus help the crops, nothing can be further from my intention than to countenance the idleness and neglect of those who suffer the weeds to choke or shade the plants. All I maintain, is, that weeds are good servants, but like fire, they are bad masters, they must be kept under, but not exterminated. They must be made to hold their proper place and do their proper work, and subserve their proper end. If they are entirely destroyed they can do neither. And who will believe that so large a portion of the works of God were made in vain. If a person has a regard to the profit of his horticultural labors, and his circumstances will allow of his doing things at the most proper time, he will permit the earth to clothe itself with these light garments, which nature has provided in anticipation of those which she intends for her more staple and substantial dress.

Another advantage from this practice is, the weeds afford a food for the innumerable insects and worms with which the air and earth are at that season filled. And if they do not entirely protect the rising plant from the ravages of these insects, and worms, they in a considerable degree relieve them from the injury they are liable to receive from these destroyers of vegetation.

One considerable objection to this mode of cultivation will present itself to the mind in the appearance a field or garden will exhibit. This, however, in part arises from the influence of imagination. A garden overrun with weeds is, to be sure a disagreeable sight. But this is the case, not because the weeds themselves are destitute of beauty, for many that go under this name are among the handsomest of the vegetable world; but because, from association they carry the mind to the bed of the slothful, who prefers a little more folding of the hands to sleep, to the labor to which the appointment of Providence calls him. When it is perceived that these are drawn into the service and subjected to the control of man, and are made to subserve his interest, to hold their proper place and do their proper work, they immediately appear to become what they really are, a part of that creation, which God pronounced, and all wise men have found to be good. They become indeed the more pleasant, because they are as it were, redeemed from what has generally been considered the wild and unprofitable part of creation, and offer one more proof that where God works, nothing is made in vain.

REMARKS BY THE EDITOR. It will be allowed that the ideas suggested in the above are not only novel but contradictory to the general current of agricultural authority. Writers on husbandry direct the farmer and gardener to wage ceaseless war with weeds, and destroy them if possible while yet in the seed, before they have begun to vegetate. And we believe for common practice, and farming on a pretty extensive scale it is best for the cultivator to destroy weeds when he can most easily effect their destruction. If they are made protectors of the ground against the rays of the sun, they are apt to monopolise the soil to the exclusion of more valuable vegetation. Still we agree with the writer that the soil should never in the summer season, be destitute of a vegetable covering. The action of the sun on the surface of the soil in warm weather disengages and dissipates the volatile and gaseous products which constitute its fertility. This is in a great measure prevented by keeping the ground constantly covered during summer with a vegetable carpet. It is better that this carpet should be composed of vegetables of little value than to suffer the earth to remain without covering of any kind. But at all events, weeds should all be cut down or dug up before their seeds have become ripe, and if their races should become extinct, it will be easy to find substitutes to shade the soil—such as spinage, lettuce, cabbage plants, &c. the seeds of which cost but little, and their produce is more valuable either for shading the soil, or furnishing food for man or beast.

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* *See* New England Farmer, *Vol. i. page* 151.

† *This observation is doubtless well founded Sir John Sinclair, says, "when a large portion of dung is used, the vegetable is forced so rapidly, that it is deficient in flavour. A moderate quantity of dung produces a better quality; but vegetables grown luxuriantly in a fresh maiden earth, are the sweetest. In such soil the leaves of the brassica or cabbage tribe are sometimes so superior in quality as to be nearly transparent.*—Edit. N. E. Far.

FROM THE CONCORD GAZETTE.

The Trustees of the Society of Middlesex Husbandmen and Manufacturers, report for the information of the Society, that at their annual meeting at Concord, December 31, 1823, they awarded to Col. Joseph Valentine of Hopkinton, the premium of $10 for having raised the greatest quantity of Indian corn on one acre of land, being 127 bushels and three pecks.

Col. Valentine gives the following account of the mode of cultivation adopted by him, viz:

The quality of the soil is a deep yellow loam, situated on a western declivity and naturally moist. The land has been improved for mowing six years last past, and until the last year it has yielded very heavy crops. In July, 1822, the crop of hay falling below the produce of former years, I thought it expedient to stir the ground. In August following the ground was broken up, and in November it was harrowed and cross ploughed. In the spring of 1823, it was again ploughed and harrowed, and twenty loads of green barn manure, spread equally over it and ploughed in. It was then furrowed in rows about three feet and a half a part, with a large horse plough, the plough going twice in each row to make a deep channel for the compost manure, and also to leave the seed when planted lower than the general surface of the ground. The rows thus prepared, were filled with twenty loads of barn, hog-yard, and night manure, well mixed and pulverised with Smithfield lime: the manure was then levelled, and the kernels of seed placed about ten inches apart width-wise, and four inches lengthwise in the rows and lightly covered with fine mould. The seed was the yellow twelve rowed corn, which was soaked in a strong salt-petre brine, twenty-four hours, and then spread, sprinkled with quick lime and raked over until completely coated with lime. It was ploughed twice and hoed three times. At the last hoeing, the first of July, the suckers were pulled out, and in the fore part of August, the suckers were again pulled away and the false stalks cut up. In hoeing the corn I was particularly careful to loosen the soil and remove the weeds without raising the earth about the stalks as I had usually done. The stalks would average from nine to ten feet high, and were cut the first week in September. The first week in October, the corn was harvested, and carefully measured in baskets by two men who had assisted in cultivating the crop. I directed the same men to take each of them a basket and fill it with ears in the same manner, as when they measured the whole, and to shell and measure the quantity of shelled corn obtained from each basket of ears; the amount of shelled corn from each basket of ears was the same, viz. nineteen quarts, and when turned together and measured, the result was one bushel six quarts and a fraction over, from the two baskets—By computing the produce of the whole acre from the quantity of ears as measured in the basket, and the amount of shelled contained in a basket of ears, the result is one hundred and twenty seven-bushels and twenty-one quarts of shelled corn. The field in which the above acre was measured contains three acres, one half of which was planted with seed prepared as above described; the other half was planted with seed in its natural state. The corn in every part of the field came up well, and as all the ground was cultivated and manured alike, there could be no difference in the quality of the soil to invite or repel insects and vermin. But that part which was planted with seed in its natural state, at least one sixth part of the blades were eaten off and destroyed by worms; while in the part planted with seed soaked in brine and coated with lime, not a blade was discovered that had been attacked by them. This is the first experiment I ever made to prove the utility of securing corn against the ravages of worms, by any process applied to the seed. Perhaps the mode above described and pursued by me will not always be attended with the like success. It may, however, be the means of exciting the attention of others who have more leisure and ability than myself to discover and apply a certain remedy for so great a nuisance to the farmer.

EXPENSES OF CULTIVATION.

Four Ploughings,	$5 00
Harrowing,	1 00
Manure, 40 loads,	30 00
Furrowing,	75
Seed,	50
Planting,	4 00
Ploughing and hoeing,	7 50
Cutting stalks,	3 00
Harvesting,	4 00
	$55 75

The value of the stalks and fodder I consider equal to a ton and a half of English hay.

* * *

NATURAL HISTORY.—No. 6.

(Continued from page 342.)

Periodical Migration.—The swallow, about whose migrations so many idle stories have been propagated and believed, departs from Scotland about the end of September, and from England about the middle of October. In the latter month M. ADANSON observed them on the shores of Africa after their migrations from Europe.—He informs us, however, that they do not build their nests in that country, but only come to spend the winter. M. PRELONG has not only confirmed the observations of ADANSON, in reference to swallows, but has stated, at the same time, that the yellow and grey wagtails visit Senegal at the beginning of winter. The former *(Motacilla flava)* is well known as one of our summer visitants. The nightingale departs from England about the beginning of October, and from the other parts of Europe about the same period. During the winter season it is found in abundance in Lower Egypt, among the thickest coverts, in different parts of the Delta. These birds do not breed in that country, and to the inhabitants are merely winter birds of passage. They arrive in autumn and depart in spring, and at the time of migration are plentiful in the islands of the Archipelago. The quail is another of our summer guests, which has been traced to Africa. A few, indeed, brave the winters of England, and in Portugal they appear to be stationary. But in general they leave this country in autumn, and return in spring. They migrate about the same time from the eastern parts of the Continent of Europe, and visit and revisit in their migrations the shores of the Mediterranean, Sicily, and the islands of the Archipelago.

While these birds perform those extensive migrations which we have here mentioned, others are contented with shorter journeys. Thus, the razor-billed auk *(Alca torda,)* and the puffin *(Alca artica,)* frequent the coast of Andalusia during the winter season, and return to us in the spring.

These facts, and many others of a similar nature, which might have been stated, enable us to draw the conclusion, that our summer birds of passage come to us from southern countries, and, after remaining during the warm season, return again to milder regions. A few of our summer visitants may winter in Spain or Portugal; but it appears that in general they migrate to Africa, that unexplored country possessing every variety of surface, and consequently great diversity of climate. It is true that we are unacquainted with the winter retreats of many of our summer birds of passage, particularly of small birds; but as these arrive and depart under similar circumstances with those whose migrations are ascertained, and as the operations which they perform during their residence with us are also similar, we have a right to conclude that they are subject to the same laws, and execute the same movements. What gives weight to this opinion, is the absence of all proof of a summer bird of passage retiring to the north during the winter season.

In proof of the accuracy of the preceding conclusion, we may observe, that it is a fact generally acknowledged, that the summer birds of passage visit the southern parts of the country a few days, or even weeks, before they make their appearance in the northern districts. Thus, the common swallow *(Hirundo rustica)* appears in Sussex about the beginning of the third week of April; while in the neighbourhood of Edinburgh it is seldom seen before the first of May. The cuckoo appears in the same district about the last week of April; in Edinburgh seldom before the second week of May. The reverse of this holds true with these summer visitants at their departure. Thus, dotterels *(Charadrius morinellus)* forsake the Grampians about the beginning of August, and Scotland by the end of that month; while they return to England in September, and remain there even until November. A difference of nearly a month takes place between the departure of the goatsucker *(Caprimulgus Europæus)* from Scotland and from the south of England.

Having thus ascertained the winter haunts of our summer birds of passage, let us now endeavour to find out the summer retreat of our winter visitants. The conclusions which we have already established dispose us to look for these birds in countries situated to the northward.—And as we are much better acquainted with the ornithology of those countries than of Africa, it will be in our power to prosecute our researches with greater certainty of success.

The snow-bunting *(Emberiza nivalis,)* which is among the smallest of our winter guests, retires to the hoary mountains of Spitzbergen, Greenland, and Lapland, and there executes the purposes of incubation, making its nest in the fissures of the rocks. In these countries it is therefore a summer visitant, as it retires southward in autumn, to spend the winter in more temperate regions. To the sea-coasts of the same countries, the little auk *(Alca alle,)* and the black-billed auk *(Alca pica,)* repair for similar purposes as the snow-flake. The *woodcock* winters with us, but retires in the spring to Sweden, Norway, and Lapland.

The fieldfare and the redwing resemble the woodcock in their migrations, depart at the same season, and retire for similar purposes to the same countries.

These instances may suffice to support the conclusion, that all our winter birds of passage come from northern countries, and that the winter visitants of the south of Europe become the summer visitants of its northern regions. This is evidently an arrangement depending on the same law by which the African winter visitants become the summer birds of passage in Europe.

In support of this conclusion it may be mentioned, that, in their progress southward, the winter visitants appear first in the northern and eastern parts of the island, and gradually proceed to the southward and westward. Thus the snow-bunting arrives in the Orkney islands about the end of August, and often proves destructive to the corn fields. It then passes into the mainland of Scotland, and is seldom seen in the Lothians, even in the high grounds, before November. In like manner, the woodcock, which crosses the German Ocean, is first observed on the eastern side of the island, and then by degrees disperses towards the west and south.

That these periodical movements take place, in order to guard against the vicissitudes of the seasons, must appear obvious to all, from the consideration of the facts which have been stated. An early winter brings the migrating birds from the north to this country before their usual time, and an early spring hastens the arrival of our summer visitants. In the beginning of winter the snow-bunting is found only in the high grounds and it descends to a lower level with the increasing severity of the season.

During the autumn, we thus observe a latitudinal movement of many species of birds towards the equator, in search of the temperature congenial to their constitutions, and which the winter of the district of their summer residence could not afford. The autumnal shifting of the feathered tribes, may therefore, with propriety, be termed the *Equitorial Migration*; all those species in which it is observed, returning from the pole towards the equator, each according to limits peculiar to itself.

The vernal shifting takes place with the increasing temperature of the high latitudes, and may be termed the *Polar Migration*, as all the species in which it is observed recede from the equator and approach towards the pole.

The extent of degrees of latitude traversed in these migrations, differs, as we have seen, according to the species, and even in the same species in different parallels of longitude. Thus, the nightingale, in its polar migrations, does not reach the 55° of north latitude in Britain, while in Sweden it reaches to the 60°. Anomalies of this kind cease to excite our surprise, when it is considered, that the *isothermal lines* (or the latitudinal lines under which the mean annual temperature is the same,) are not parallel with the sun's course, or do not observe a regular increase or diminution with the difference of latitude.—Even the *isotherial lines*, (under which the mean heat of summer is the same,) and the *isothermal lines*, (under which the mean heat of winter is the same,) are neither parallel to one another, nor to the isothermal lines. These differences, which Humboldt has investigated with so much success, exercise a powerful influence on the distribution of plants and animals, and regulate the limits of those periodical migrations we have now been considering.

The preceding remarks relate to the equatorial and north polar migrations. Movements depending on the same circumstances, in all probability, take place on the other side of the equator towards the south pole. The Cape swallow *(Hirundo Capensis,)* according to the observations of Captain Carmichael, arrives at the southern extremity of Africa in the month of September, the commencement of the summer of that district, and departs again in March or April, on the approach of winter. Reasoning from the analogies of the north polar migrations, we may conclude, that this species of swallow resides the remaining part of the year near the equator, and that its south polar migrations extend to the Cape of Good Hope.

It appears from these movements of birds, that in the cold season, the polar regions are deserted by some species, and that there is an accumulation of life towards the equator. At another season, the equatorial regions are, in some measure, deserted by their temporary inhabitants, and the polar districts become peopled by the change.

Having now ascertained the period and the direction of these migrations, let us next attend to the act of migration itself, and the circumstances attending the flight.

(To be continued.)

HYDROPHOBIA—Singular effect of.

Extract of a letter from a farmer of great worth and respectability, in Jefferson County, Virginia, to W. M. Barton, Esq. Vice President of the Agricultural Society of the Valley, dated Nov. 27th, 1823.

"The facts which I related to you, in a late conversation at Washington, in relation to a case of hydrophobia, occurred here several years since, in the instance of a *cow*, which had received the infection from the bite of a dog, labouring under that dreadful malady:—they passed under my own observation, and although of a most singular and astonishing character, were regarded at the time rather as anomalous, than as symptomatical, or indicative of the hydrophobial disease; and I thought little of the matter until it was *recalled* to my recollection by your communication to the Editor of the American Farmer, in Vol. 5. No. 1. of his valuable Journal, detailing the *effect* of the disease, as exhibited in a flock of sheep, in remarkable co-incidence with what I had noticed in the instance of the cow above alluded to. A few weeks after the animal was bitten, (the precise time not recollected) I observed her in the pasture, remote from the herd, accompanied only by the bull—the first circumstance that attracted my attention was her "bold countenance, staring and glassy eyes," with a fixed *gaze*; but betraying no evidence of ferocity, or a disposition to make battle. In a little time I discovered all those libidinous actions, and venerial inclinations as described by you to have been displayed by the sheep, and her amorous asiduities were unremitting as long as I remained near enough to notice her, which, however, (the scene being a disgusting one) was for a very short space of time. I saw nothing more of the animal for two or three days after the above described scene, when I found her dead *very near the margin of a stream*. Upon inquiry afterwards I was informed by the dairy maid that she continued to milk this cow from the time she was bitten, until the symptoms of hydrophobia became apparent."

[We have conversed with several physicians who have read and seen much of hydrophobia, but have no where witnessed an exhibition of accompanying symptoms, such as are described above—and in number one of this volume. They corroborate each other so strongly, that we deemed it proper to record the cases, as by a comparrison and combination of these, and similor ones, scientific and professional men may draw inferences, and establish theories that may prove useful in the medical department. It is with the same view of aiding researches in the natural sciences that we register the following remarks of our correspondent on the subject of superfœtation, and the influence of the mother's imagination on the offspring.]—*Edit. Am. Far.*

TO THE EDITOR OF THE AMERICAN FARMER.

PLEAS BEFORE THE HON. CHIEF JUSTICE RATIONAL, IN THE VALE OF KENTUCKY.

Nature, alias *The Mare and the Sow.*	vs.	*Superfœtation,* alias *the Quagga & the Wild Boar.*	*upon a writ of error.*

This is a cause which originated with Earl Morton and Doctor Wollasten; was reported to the Royal Society, and was communicated by John Farey, Esq. to the *London* Farmer's Journal, from which it was copied in the American Farmer, vol. 3, page 303; and no decision having been reported to the Back Woods, it was determined to try the question before we receive extravagant Bulls.

To understand this cause perfectly, the publication referred was read, and although it appeared that two separate actions were originally maintained, the first, the quagga against a sorrel mare, for secretly, fraudulently, and beyond a reasonable period, retaining properties belonging to the said quagga. The second cause was of a chesnut coloured boar of the wild breed, against a black and white sow for the like fraud.

The trial of this cause was objected to on the grounds that none of the parties were within our jurisdiction, but this objection was overruled when Nature claimed to be heard in every country, and that Chief Justice Rational ought to preside in every clime, and offered to substitute her name in the place of the mare and the sow, and to blend the two actions.

In the opening of this cause on its merits, dame nature urged that the idea of superfœtation when not limited to that portion of creation, whose embryo is brought forth in the shell, was such an outrage upon her principles, that she did not know how to meet the question until she heard the arguments of the gentlemen in opposition, that it was her universal and known law, that whatever was conceived was timely brought forth, that an imperfect deposit was (if she might use the expression) converted into all that it would make, and that no portion of it was ever *cabaged*. With this statement she would, for the present, give way, not only to such as were employed on the other side, but to those who might wish to volunteer.

Mr. Surface remarked that he could not say he was, strictly speaking, a volunteer in this cause; that he was requested by his friend Worsted, to establish the doctrine now advanced. That although this cause is not in hearing before a regular court of the realm; yet if the doctrine could be established, he expected to be employed by his friend, in the regular courts of the country. That by the statutes of this state, if my neighbour has a beast which breaks over my lawful fence, I may either kill the beast or bring an action against its owner for damages.

That Mr. Worsted is the breeder of sheep upon a large scale, that one of his neighbors owns a ram of bad fame, who some years since, broke into his close, knocked down his shepherd, beat both of his merino bucks, and took possession of his flock, that his sheep now yield wool of different qualities in the same fleece; that he had no doubt but this bad wool was the breed of this ram of ill fame. That it appears in evidence in the record before us that the second and third foal of the sorrel mare, were in form perfect horses, and that they only partook in colour and mane of the quagga; that it does seem, that the first foal must have slipped from its warm bed and left a coat of its hair behind, which adhered to the two subsequent foals. Now if this could have happened in the present case, I shall contend that the same thing may have taken place with Mr. Worsted's lambs.

Mr. Carcase observed that he might truly say he was in a situation similar to Mr. Surface, but that his friend was Squire Broadhorns, who had procured a bull of superior form and blood; yet his calves were not remarkable, except for the size of their horns and tails, resembling in form and color his neighbor's breakfence bull; and that he should, for his friend, bring suit immediately against the owner of the said bull, for the damages sustained in his cattle by previous impregnation; that the doctrine was sufficiently plausible to be adopted without further enquiry, and the facts too strong to be resisted. It is true Mr. Surface's ideas do not go quite deep enough to answer Squire Broadhorns' case, yet adopt any portion of the doctrine, and we must go the whole. It is a trite saying that beauty is but skin deep, yet I have heard it said that ugly goes to the bone, and I am sure there is nothing in this doctrine so beautiful as to prevent its penetrating even to the marrow.

Mr Wag hoped it would be no intrusion to say a few words, although he was wholly a volunteer in the cause. He was the neighbour of both Mr. Worsted and Squire Broadhorns, but was neither the owner of the ram of bad fame, nor of the breakfence bull, he would, however, inform the court that in his opinion it was not the blood alone of improved breeds which was to make such a revolution in our stock, we must give those improved breeds more attention than our common cattle, or they will not even equal them. Mr. Worsted lets his merinos, half starved, run through the briars, (which he says is good food for them) and pull out nearly half the fleece; here then his fleece is of different growths. Squire Broadhorns lets his *quality* calves become skeletons about the time the cuckhold burrs are ripe, they totter through them, and pull their tails nearly off by the load of burrs which are dragging at their heels, and having to push the stiff iron weeds before them, to get through his pastures, their horns become enlarged, and now by this new doctrine, both of my neighbors expect to shield themselves from that portion of animadversion which always awaits slovenly farmers.

Could I hope to escape being thought censorious, I would further add that this new doctrine must have originated with those who have the improved stock for sale, and expect by awakening the fears of us clodpates, to induce us to send for a greater portion of their breeders. The doctrine I consider, however, about upon a par, with our sassafras nutmegs; and I hope its advocates may derive as much advantage from our invention, as we shall from their discovery.

Dame Nature again urged, that as nothing had been said which seemed to add to the facts already before the court; she would in conclusion, bring to view some facts which must have their weight in proving that superfœtation, as presented here, could not take place.

It is well known to all who know any thing about births, that whether a single or plurality of embryos are conceived, that each has its separate secundæ; that this secundæ can never afterwards be penetrated, and that *it* must soon follow the birth, or death ensues to the mother. If this doctrine be true, (and it cannot be controverted) it would seem that nothing was left on which the new theory could rest. But "to make assurance doubly sure," we will endeavour to account (and we hope satisfactorily) for the colours of the young, without tracing it to the blood of their most remote ancestors on either side. We must admit that the mare and the sow have imaginations, or at least recollections. Their *first* offspring was from animals, of which their second and third young partook in colour. Will it seem strange to any reflecting mind, that when the mare again become in season, her recollection dwelt upon the quagga, the only object of her dalliance, that at the second and even third impregnation that she should recollect that her similar, her previous, exquisite sensibilities were first called into action by the quagga?

If this assumption be true the experience, the every day's experience of all observing breeders, is that the young most frequently partake of the colour of animals present at conception, the quagga then being present to the imagination of the mare, his colour was imprinted on the foal.

The same may be said of the sow and her young, and as strong corroborating evidence of this, the third litter was more slightly tinged than the second, owing to the lapse of time having weakened her recollection Witness also the pious fraud (if I may so speak) which Jacob practised upon Labon, by placing the ring streaked speckled rods before the flocks at the time of their conception. With these views before the court we submit the cause.

The Chief Justice decided that the charge of fraud in this action is without foundation, the colourable pretence, notwithstanding And this cause is hereby remanded to the society where it came, with instructions to enter up a final decision, not inconsistent with the doctrines which dame Nature, in her discussion, advanced.

A Copy attest—
A BACKWOODSMAN, *Clk.*

FROM ANOTHER CORRESPONDENT.

"The late Doctor Smith related the following tale of a setter; and from which he maintained that a bitch and a dog may fall passionately in love with each other.

As the Doctor was travelling in Hampshire, the dogs, as usual in country places, ran out barking as he was passing through a village; and amongst them he observed a little ugly *cur* that was particularly eager to ingratiate himself with a setter bitch that accompanied the Doctor; whilst stopping to water his horse he remarked how amorous the *cur* continued, and how courteous the setter seemed to her admirer. Provoked to see a creature of *Dido's* high blood so obsequious to such mean addresses, the Doctor drew one of his pistols and shot the *cur;* he then had the bitch carried on horseback for several miles; from that day, however, she lost her appetite, eat little or nothing—had no inclination to go abroad with her master, or attend to his call, but seemed to pine like a creature in love, and express sensible concern for the loss of her gallant.

Some time after she was coupled to a setter of great excellence, which had been procured with great pains and difficulty—and the Doctor had the greatest caution, that the whelps might be pure and unmixed; yet not a puppy did *dido* bring forth but what was the picture and colour of the *Cur* that he had so many months before destroyed—and what is still more remarkable, *Dido* never produced a whelp afterwards in her subsequent litters which was not exactly similar to the unfortunate *cur*, who was her first and murdered lover."

Daniel's Rural Sports, III. 340.

The above is the fact I alluded to in our conversation on this subject—and would be deemed by me conclusive, if the veracity of the Doctor was perfectly established. I have heard many persons of consideration in the world, as well as Doctors, tell things, which if out of the common experience of their auditors were very properly considered—as mistakes—such may, or may not be the case with Dr. Smith. M.

FROM THE NEW YORK GAZETTE.

REMEDY FOR HYDROPHOBIA.

The following interesting notice of the discovery of means to prevent that dreadful disease so frequently consequent upon the bite of a mad dog, is a translation from a German paper of the 2d of November last:—

"All caustic alkalies have, in consequence of the numerous and repeated experiments of Messrs. Von Redi, Fontani, Mederer Von Wuthwehr, and others, been found to possess the property of rendering altogether harmless the poison of the bite of a mad dog. The wound must be well washed, as soon as it can be procured, with *ley*, which, however, must not be stronger than can be borne in the mouth. If it be stronger than this, it has the effect of drawing the edges of the wound together, and preventing the ley from being applied to the bottom of the wound, where it might meet with and neutralise the poison."

"It is astonishing," adds the abovementioned paper, "that this, so simple a remedy, should not have been before discovered; and were it published in all the schools and academies of medicine, it would have the effect of saving many valuable lives."

HYDROPHOBIA.

The following mode of curing *hydrophobia*, is certainly novel, and *may* supercede *scullcap.*—"An extraordinary surgical operation was performed a few days ago in one of the great hospitals of Paris, upon a man labouring under the dreadful *malady, hydrophobia.* He had for some time manifested the utmost horror for liquids, and showed a disposition to bite whatever came in his way.—The surgeons of the hospital determined to try upon him an experiment which had been found successful when applied to animals. The operation consisted in the introduction of water into the veins, by means of an incision above the wrist. The experiment fully succeeded, as the patient now takes liquids without aversion, betrays no inclination to bite, and is free from fever.

APPARENT EMASCULATION OF SQUIRRELS.

TO THE EDITOR OF THE AMERICAN FARMER.

Charleston, January 9, 1823.

Sir—In your farmer of the 26th December last, I was much pleased with the learned and liberal communication, signed "P. Macauly," and solicit for your readers some further productions of his pen, which I feel assured will continue to afford them, as it has me, both instruction and amusement. I candidly confess my limited knowledge of comparative anatomy, and admit the facts and positions of your friend; but he will excuse me in differing from him in the conclusion drawn from these premises.

Although the adult male squirrel may have the power of occasionally redrawing the testes, after their descent from his abdomen, into their external position; I cannot admit that their apparent emasculation is often, if ever, occasioned by their voluntary agency. The Scrotum or receptacle for the testes, formed by their descent, when eight or nine months old, is so prominent and conspicuous, that it could not contract, or be absorbed, and be totally invisible, under many months after it had been so drawn up by the animal. Now I appeal to the observation of sportsmen, and all who have noticed this peculiarity in the squirrel, whether the part where this apparent defect is discovered, is not as smooth and as uniformly covered with hair, as any other part of the perineum, even in the female squirrel. I appeal to the candour of your correspondent, whether this could possibly be the case, if the scrotum had been voluntarily deprived of its contents, by their being occasionally withdrawn by the squirrel? Even if so drawn up by the muscular power in life, would not that cease to act on the death of the animal; and the relaxation, and prostration that ensues, admit of the immediate return of the testes to their proper position.

Your friend has been pleased to say of my first communication "his acute observation has enabled him to arrive very nearly at a truth, which he could have established, had he been a comparative anatomist," he has been good enough to supply this defect in evidence. From this evidence and from "the case in point" stated in my last, I conclude, that the apparent emasculation of squirrels is a mistake, that this mistake arises from the age of the animal, as these organs are not matured until he is eight or nine months old, the season for his first sexual intercourse. That they then descend to their proper place, and are ever after visible; that although the squirrel may have the power of drawing his testes back again into his body, yet his doing so, is seldom, if ever the cause of his supposed emasculation.

Your's,

SENEX.

TO THE EDITOR OF THE AMERICAN FARMER.

GRAFTING AND BUDDING—SEEDS OF A NATIVE GRASS, &c.

Edgefield, S. C. Pottersville, Jan. 5th, 1823.

DEAR SIR,

I made some experiments, the preceding year, on summer grafting, useful and new to me, at least. At that time I had never read, or heard of this operation being performed in the summer, except with twigs cut the preceding winter. About the first of July, when the growth of some trees had become stationary, I cut a twig of the pear tree, and inserted it on a nursery stock, which readily grew off. I next tried almost every variety of orchard fruits, which succeeded perfectly well. I was induced to make this experiment from the rationality of the theory, it having occurred, upon the slightest reflection, that failures in spring grafting might originate from the dissipation of moisture, by the drying winds peculiar to that season, before the sap of the stock acquires sufficient motion to furnish the graft with due nourishment; but from the rapid motion of the sap in some stocks, with the general moisture of the air during midsummer, the operation would seldom fail; and the result fully proved this conclusion well founded. It next occurred to me that the walnut, fig, and persimmon, which will not succeed in the spring except by mere chance, might now answer upon the same principle of reasoning: I accordingly made the experiment, and succeeded.

To make the success of summer grafting certain, take the twigs to be inserted, from a tree in which the sap is, as near as possible, stationary; and select a stock, in which the sap has the greatest possible motion. July is the proper time for summer grafting, and indeed the most suitable month of the twelve for that operation. However, the operation may be performed with tolerable success, during the remainder of the summer and the fall months. The information I have suggested in this hasty communication, is of considerable importance to the orchardist; as it will enable him to propagate fruits at any season of the year, whether in bloom, bearing, or casting their leaves. In May and June budding will succeed well, while grafting can be performed successfully, at any time during the remaining part of the year. Such trees should be preferred for summer and fall grafting, unless otherwise objectionable, which continue their growth late in the season. A plum, whose leaf resembles that of the cherry, and is called the cherry plum, brought to this district by Col. C. Brighthop, I believe, from N. York, is on this account, well calculated for a stock for plums, peaches, nectarines, and apricots. The wild crab should be generally preferred for the apple.

The foregoing observations may not be new to all your readers, they will doubtless, not only be productive of novelty, but profit to many of them; and as often as any thing of utility occurs, in the course of my practice, I will cheerfully submit it to your disposal.

I have sent you some more of the swamp grass seed, which are calculated to render clayey bogs, and wet land generally, of much value. Last spring I sowed the seed of a grass, from Barnwell district, called the Missouri grass, and esteem it very highly. It is the tenderest grass I have tried; and perhaps the sweetest. The whole summer's growth, not only remaining green till winter, but has continued to throw out fresh shoots from the old joints. At the close of the ensuing season, I hope to be able to give you a better account of its properties, with a few of the seeds.

The theory I suggested to you, in a former letter, for preventing the washing of hilly lands, by horizontal rows of winter grass; practice is daily confirming, you shall be duly apprised of the final result; which, if successful, will prove of incalculable benefit to proprietors of broken land possessed of fertility.

Very desirous of witnessing the successful prosecution of your undertaking,

I remain, your's, &c.

ABEN LANDRUM.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

Baltimore January 5, 1824.

A report of the tobacco inspected at and delivered from Williams & O'Donnell's Inspection Warehouse, Baltimore, during the quarter, commencing on the first Monday of October, eighteen hundred and twenty-three, and ending on the first Monday in January, eighteen hundred and twenty-four.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	262		12	274
Number delivered.				402

JOSIAS STEVENSON, Inspector.

TREASURY OFFICE, ANNAPOLIS, Jan. 13, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Calhoun's Inspection Warehouse, Baltimore, commencing on the first day of November, eighteen hundred and twenty-three, and ending on the thirty-first day of December, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	1065		51	1065
Number delivered.				1674

RICHARD MACKALL, Inspector.

TREASURY OFFICE, ANNAPOLIS, Jan. 5, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

POPE'S THRESHING MACHINE.

Rockland, January 11, 1824.

MR. JOSEPH POPE, JR.

Sir—Your letter of the 5th inst. did not reach me until yesterday, by which, as well as by your letter addressed to Mr. Skinner, published in a late number of the American Farmer, I regret to find that you think you have cause to complain of the opinion, given by the committee on agricultural machinery and implements, relative to the Threshing Machine, exhibited at the late Maryland Cattle Show, as the invention of Mr. Joseph Pope, of Boston; and I should still more regret, if that opinion should have the effect either to lessen the confidence of the public, in the utility of the machine in question, or in any degree to paralize your efforts to bring it into more general use.

The language used by the committee, under circumstances certainly not the most favourable, to critical accuracy, was intended as descriptive of its leading principle of action, which they considered of Scotch invention, first introduced by Mr. Andrew Mickle, about the year 1772—I allude to the Thrashing Drum, or Cylinder, placed in a horizontal position, upon the circumference of which beaters were attached in such a manner, as to endure the necessary motion.—Various have been the contrivances since that period, to apply this principle to the greatest advantage, and the committee certainly considered the machine presented to their examination, as possessing a more happy and successful combination of power connected with this principle, than any heretofore offered. With such claims to the public patronage, they considered it entitled to the premium awarded.

I, therefore, cannot but think, the prejudicial effect apprehended by you, from the clause objected to, will be found to be more hypothetical than real. It is assuredly my wish, that it may prove so, and I believe every member of the committee would concur with me in the sentiment.

Very respectfully,

Your obedient servant,

SAML. McCULLOH.

POPE'S PATENT THRESHING MACHINE,

Adapted to Hand or Horse.

The reputation of this machine being established for usefulness, among all those practical and intelligent agriculturists who have witnessed its performance—It is offered for sale.

The Machine is simple in its construction, not liable to get out of order, cheap, powerful, and efficient in its operation; and its thrashing principle will stand the test of the most critical investigation relative to its mechanical combinations for originality in economising power. With the ordinary draught or power of one horse, and with one man to feed the machine, and another to remove the straw, the inventor guarantees it shall possess capacity to thrash with easy labour, eight bushels of wheat per hour—other grain and seed, such as oats, rye, millet and rice, it will thrash with the same facility. Although the inventor does no wish, from motives of prudence only, to guarantee the performance of the machine, beyond the quantity stated above, it has been proved by the various agricultural societies, who have witnessed its operation, and awarded it their highest premiums, that its capacity is much more extensive.

A single machine adapted to the power of one horse, well made, durable and efficient, can be furnished at $125.

And a machine is, in every respect, like the above, without the horse gear, to be worked by hand, at $75.

Privileges of the patent right for making and using this machine in state or county, will be sold on moderate terms, as an inducement to mechanics particularly, to become purchasers; and it will appear obvious, upon examination of this valuable and important invention, that its simple contrivances are immediately understood, and its construction within the reach of any of them.

Notice will be given by agents in the respective states where to apply.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 23, 1824.

In compliance with the wish of the Trustees of the Maryland Agricultural Society, the Editor went down to Annapolis to explain personally the views of the Board, in relation to their prayer, for an act of incorporation, and for pecuniary aid—but circumstances made it impossible to remain long enough to seek the honour of a personal interview with many of the members; and he was forced to have recourse to the medium of letter communication. The one below was addressed to an honourable member from —— county, and as the suggestions it contains, may with equal propriety, be addressed to all, and is altogether confined to a topick of public and general interest, he has concluded to send it to the printer for insertion in the American Farmer.

DEAR SIR,

I much regreted that circumstances did not allow me, personally, during my short stay in Annapolis, last week, to invite your attention, and bespeak your support, to the views of "the MARYLAND AGRICULTURAL SOCIETY," as exhibited in the sketch of a bill, now in the hands of Mr. Chesley. Under a firm persuasion of the substantial benefits that would arise from a wider distribution of premiums, for improvements in agriculture and the various branches of domestic œconomy; the society pray from the legislature, a small sum, say one thousand dollars, between the two shores, in aid of individual contributions, for the *space of five years* The effect of the donation, will then have been fully developed and seen, and the legislature, acting in correspondence with the public sentiment, can renew or withdraw it accordingly.

Should local jealously, that political *Incubus* which suffocates all who attempt to raise their voice in behalf of internal improvements in Maryland, here again suggest, "my county being more distant, may not derive from this donation, its full share of benefit," that objection will be readily obviated by the fact, which you are authorised to aver, that the whole sum given by the state will be applied to objects, for which every farmer, and farmer's wife, may compete *on equal terms*, without regard to locality. For example, take the case of excellence in CROPS, of every kind—grain, grass, fruits, tobacco, culinary vegetables, &c. &c. Claims for these, will be supported by *documentary evidence*, and by judges drawn from every county in the state; so that whether the claimants reside in St. Mary's, in Anne Arundel, or Allegany, in Worcester, in Caroline, or Cœcil, their pretensions will be subjected to the same test, and their merits impartially weighed. The remainder of the donation from the treasury, will be bestowed in rewarding the taste and industry of the fairer and better part of creation, the farmers' wives and daughters, and all the fruits of their emulation, being of small bulk, and of easy and safe transportation, may be exhibited, with comparatively no inconvenience. They will consist chiefly of family domestic fabrics, of every description, in regard to which, as well as to every thing else, coming from near or more distant points; it ought to be considered, that the place and the occasion, constitute for them the *most eligible market*. It is only in the case of *domestic animals*, that vicinity to the place of exhibition will confer any advantage, and that is often over balanced by the greater convenience of water transportation from more distant situations. For the premiums in these cases, we shall be indebted, *exclusively*, to individual contributions, nine-tenths of which, be it remembered, are collected *in the immediate neighbourhood of the show*, and invested in premiums which are *freely offered to competitors, from all parts of the state.* The project of the law submitted to the agricultural committee, enjoins, that a stipulated sum shall, each year, have been previously collected, by voluntary contribution, and that a detailed report be made by the society on each shore, of the distribution of the funds.

I need not advert to the certainty, with which a laudable feeling of emulation would be excited throughout the country, by the distribution of honorary distinctions in the permanent form of silver vases, goblets, cups, &c. to be transmitted from mother to daughter, and from sire to son, as heir-looms, and bloodless trophies of taste and industry, acquiring veneration with increasing years. In short, sir, it cannot be apprehended, that the legislators of a state, essentially agricultural, will refuse the means to honour and to "speed the plough," that most prolific source of human sustenance, to which even despots, in all the magnificence of wealth, and pride of power, have seen fit to pay annual and reverential homage.

Allow me to add, that in the great state of New York, the pioneer in all publick spirited enterprises, ten thousand dollars have been given for ten successive years, at the instance of that enlightened administrator of her internal resources, Governor Clinton. Should the supporting arm of the state be withdrawn from our infant institution, at the expiration of five years, we may confidently indulge the hope that the conviction of the benefits resulting from the labours of the Maryland Agricultural Society, will have been so widely diffused and so well confirmed, that it may, thereafter, safely rely on the spontaneous offerings of individual patriotism, and on that true discernment which dictated the philanthropic declaration, that

"He who causes two blades of grass to grow, "where only one grew before, is entitled to "more honour and gratitude than the most re- "nowned warrior."

Very truly and respectfully,
Your obedient servant.

CATTLE.—We have been compelled to postpone, for want of room, some additional observations and facts relative to the Improved Short Horn breed of cattle, in continuation of an article on that subject, in our last paper.—It will be followed up in subsequent numbers; and the subject of domestic animals will not be dismissed, until we shall have explained the peculiarities of the various breeds of cattle, horses, and sheep most esteemed, under various circumstances.

ERRATA, in the publication signed "Ruris Consultus." In the 2d column, and 15th line from the bottom read "*Planters*," instead of "*Routers*"

In the 3d and last column, and 27th line from the bottom, read "*incivism*," instead of "*incision*."

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Wharf flour, $5 37½ to $5 50—Western country do, from the wagons, $5 62½—Fine do. $5 12½—Whiskey, including the barrel 28 cts.—Wheat, white, $1 10 to $1 20—Red do. $1 05 to $1 10—Corn, 34 to 35 cts.—Rye, 43 cts.—Hides, dried, 16 to 20 cts.—Iron, pig, per ton, $35 to $40—Country bar, $90 to $95—Sheet, $160 to $180—Lime, bushel, 30 to 33 cts.—Leather, soal, best 24 to 27 cts.—do. Eastern tan, 18 to 20 cts.—Coal, Virginia, 20 to 25 cts. per bushel—Susquehannah do. per ton, $20 to $25—Feathers, 35 cts.—Herrings, Susquehannah, $2 75—Gunpowder, 25 lbs. $5 to $5 50—Baltimore manufacture, do. $5—Shot, all sizes, per cwt. $8 50—Beef, northern mess, $10—Cargo, No. 1, $8 to $8 50—No. 2, $6—Baltimore prime, do. $10—Cotton, Louisiana, 16 to 17 cts.—Georgia upland, 14 to 16 cts.—Alabama, do. 12 to 13 cts.—Cotton yarn, No. 5, 30 cts., with an advance of 1 cent each No. to No. 18—Candles, mould, 12 to 13 cts.—Dipped do. 10 to 11 cts.—Spermaciti, do. 25 cts.—Hops, fresh, 35 to 40 cts.—Tar, barrel, $1 75—Pitch, $2—Turpentine soft, $2 50—Rosin, soft, $1 50—Beeswax, 30 cts.—Wool, cleaned and assorted, 15 to 20 cts. advance—Merino, full blood, 35 to 40 cts.—Crossed, 28 to 30 cts.—Common country, 20 to 28 cts.

CONTENTS OF THIS NUMBER.

Advice to Young Farmers on Horses—Agricultural Society of the Valley, *extracts from the address of H. M. Barton, Esq.*—Horticulture—Method pursued in making a crop of 127 bushels of Indian corn to the acre—Natural History, No. 6, on the migration of birds—Hydrophobia, confirmation of its effect upon the sexual passions—Superfœtation, the influence of maternal imagination on the offspring—Apparent emasculation of squirrels—Summer grafting, easy and practicable—Reports of tobacco inspections—Pope's Thrashing Machine—prices of country produce, &c. &c.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore

AGRICULTURE.

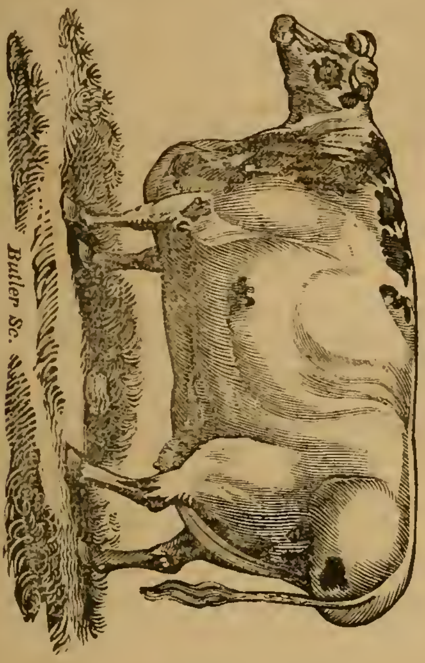
CATTLE.

VARIOUS BREEDS—IMPROVED SHORT HORNS.

(Continued from No. 43, Vol. 5, page 338.)

As a specimen of a female of this family, I shall select a near relation of the ox, [*mentioned in* No. 43.]

A COW OF MR. MASON'S, OF CHILTON.



In point of fat, not less remarkable than the ox. When I saw her in 1808, the depth of fat from her rumps to her hips, in a perpendicular position, was not less than 12 inches; upon her loins and crop, not less than 10 inches; and the shoulder score at least 9 inches thick.

Mr. Robert Colling has a white heifer four years old, a perfect counter part of his brother Charles's ox; being, like him, completely covered over her whole carcase with fat: she is estimated to weigh 1820 lbs.

Of the aptitude to fatten at an early age, I shall select a few instances.

Mr. Robert Colling sold in Darlington market, the 18th of April, 1808, a two years old ox for £22, supposed to weigh 882 lbs.; the price of fat stock at that time being 6*d*. per lb.

A few days before this, I saw at Mr. Nesham's, of Houghton-le-Spring, an ox two years old in March, 1808, (bred from Mr. Mason's stock,) completely covered with fat over his whole carcase, and supposed to be the fattest ox of his age ever seen: butchers estimated him to weigh 1050 lbs. Neither of these animals were of large size, and would not have wighed above 560 lbs. had they been no fatter than are usually killed for the markets.

Mr. Wetherill, of Field House, sold at the fair in Darlington, the first Monday in March, 1810, two oxen under three years old, for £47 10*s*. each. The price of fat cattle at this fair was about 8½*d*. per pound.

Mr. Arrowsmith, of Ferryhill, has for seven years back fed his two-year olds, and sold them to the butchers as follows:—In

	£	*s.*	*d.*	
1801, sold 4 for	25	0	0	each. 2 stots* and 2 heif.
1802, 6 for	17	10	0	each. 3 stots and 3 heif.
1803, 4 for	17	0	0	each.
1804, 6 for	18	10	0	each.
1805, 6 for	17	10	0	each. 2 stots and 4 heif.
1806, 4 for	16	0	0	each.
1807, 8 for	18	0	0	each.
1808, 8 for	19	0	0	each.

The time of selling, from the beginning to the latter end of May.

Their management is as follows: In the first winter they get straw in a fold yard, with nearly as many turnips as they can eat; in May they are turned to grass; in November put to turnips through the winter; and turned out to grass the first week in May.

In 1807, and 1808, on account of turnips being scarce and dear, they had four cwts. each of oil cake, from about Candlemas: the price of four cwts. of cake about £3.

A twin heifer calved the last week in April, being kept the first year the same as the common stock, was entered for a sweepstakes to be shewn in June, when two years old, and was then put to grass with other stock of the same age in the usual pasture; in November she was estimated to weigh 392 lbs. when she was put to ruta baga, and hay, and oil cake, of which she eat four cwts. and two bushels of bean meal, and one bushel of barley: went to grass the first of May, and had no oil cake afterwards. On the 3d of July, when she was shewn, it was the unanimous opinion of the best judges, that she weighed 812 or 840 lbs. having gained two pounds per day, for 30 weeks.

In April, 1808, I saw eight yearlings, intended for the same course of feeding: they were then *very lean*, not more than 210 lbs. each; and had they been offered for sale in a fair, no person unacquainted with the breed, would have given more for them than £4 10*s*. or £5 per head.

Mr. Walton, of Middleton, in Teesdale, has for the last six years sold his oxen about midsummer, 2¼ years old, for £20 to £21 each; their weight from 700 to 756 lbs. nett.

Their keeping is as follows: the cows seldom calve sooner than April; the calves get new milk for the first three weeks, after that a moderate quantity of scalded skimmed milk, mixt with oil cake boiled in water, about two quarts of each, along with good hay, for about six weeks; after which they do very well in the pastures without any kind of hand feeding, until the latter end of November, when they are tied up, and fed with straw and turnips until the beginning of April, from which time they get hay till the pastures are ready. The mode of proceeding is exactly the same through the next year, to the time of selling; they never get oil cake or corn.

Mr. Walton has great merit in improving the stock of this district, which was uncommonly bad before he began to hire bulls of Mr. Mason, and to purchase cows of the improved breed.

He sometimes buys in calves of the unimproved or old breed of the country, and finds that his own, at two years old, get fatter and fitter for the butcher than the others do at three, though kept and fed exactly alike.

It is a common practice among the breeders of the improved short horns, and which I first observed at Mr. Wetherill's, of Field House, near Darlington, to put the year old heifers to the bull the beginning of July, so as to calve not later than the middle of May: the calves run with, and suck their dams, until August; the cows are then put upon fog, fed through the winter with turnips, and sold to the butchers in May and June following, for £25, on an average, which, with the value of the calf, cannot be reckoned at less than £30 for a three years old heifer.

It has been already stated, that the short horned cattle were great milkers: this cannot be said of the variety which has such an aptitude to fatten, for though they give a great quantity for some time after calving, they decline considerably afterwards; but the variety of great milkers is yet to be found, wherever the dairy is the chief object, and this variety is as carefully preserved and pursued, as the graziers do that of the fatting tribe. It is very common for cows of this breed in the beginning of summer to give thirty quarts a day, and there are particular instances of more. Where the object is selling milk, they are probably superior to any breed in the kingdom; but in respect to butter and cheese, there are some doubts whether they are entitled to claim a superiority or not, as the quantity of those articles does not depend on the quantity of milk.

I was informed by Mr Walton, of Stanhope, that Mrs. Watson, near that place, got two ounces of butter from a quart of kyloe milk, which is nearly double the quantity that she obtained from a quart of milk of the short horned breed. Mr. Thomas Bates, of Halton, made similar experiments, and got two ounces from a quart of kyloe milk, and one ounce from the same measure of short horned milk.

The above induced Mr. Walton to make similar experiments on a quart of milk of each of six cows, which produced as follows:

	ozs.	*drs.*
No. 1.	3	0
2.	1	6
3.	1	12
4.	1	10
5.	1	14
6.	1	6

The quantity from No. 1 being so great, he had it tried a second time, with the same result.—No. 1 is six years old, and the others only two years old, which he thinks in some measure accounts for the difference in quantity; as he is told that the produce of butter increases with their age to a certain period; and it is very probable the above two years old cows would when three and four years old, give upwards of two ounces of butter per quart, or more than the kyloe milk. The difference between this experiment and those of Mrs. Watson's and Mr. Bates's, may be owing to the breed, Mr. Walton's being of the improved short horns, and the others of the great milking tribe. This is a subject well worthy of further and more accurate investigation.

Crosses.

Mr. Robert Collin has frequently crossed with the improved short horned bulls, and the best kyloe cows he could procure: the produce made very fat, and much earlier than the pure kyloe; but he has now given it up, finding that the pure improved short horns are more profitable.

(To be continued.)

Dead weight of the Durham steer, at 2 years 11 months old.

The fore quarters weighed	692 lbs.
The hind quarters	732
Nett weight of carcase,	1424 lbs.

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* *Stot is a provincial term applied to a young steer or bullock.*

Loose fat or tallow,	199 lbs.
Hide and horns,	91
Head,	36
Feet,	28
Blood,	34
Tongue and heart,	17
Liver, &c.	26
Entrails, &c. empty,	34
Call, melt, &c.	6
	471
Carcase as above,	1424
Total dead weight,	1895

The above is the weight of the Blythe Comet ox, at less than 3 years old, bred by Mr. Champion, the breeder of Col. Lloyd's cattle.

NATURAL HISTORY.—No. 6.

(Continued from page 348.)

Migration.—Migrating birds, before they take their departure, in general collect together in flocks. This is very obviously the case with the swallow, and is even still better known with woodcocks, terns, puffins, and shearwaters. Woodcocks arrive in this country in great flocks about the same time; and should adverse winds occur at the period of their departure, they accumulate in such numbers on the eastern shores, as to furnish the fowler with excellent sport. Geese too, dotterels, and many others, during their migratory flights, always keep in company.

But there are many migrating birds which have never been observed to congregate previous to their departure. Thus the cuckoo, seldom seen in company with his mate even during the breeding season, is, to all appearance, equally solitary at the period of migration. These birds are supposed by naturalists to go off in succession.

It is certainly a very curious, and perhaps unexpected occurrence, that the males of many species of migrating birds appear to perform their migrations a few days before the females. This is remarkably the case with the nightingale. The bird-catchers in the neighbourhood of London, procure males only on the first arrival of this bird. The females do not make their appearance for a week or ten days after. Similar observations have been made with respect to the wheat-ear.

Those birds which feed during the night may be expected to perform their migrations during the same interval, it being the season of their activity; while those birds which feed during the day, may be expected to migrate with the help of light. The migrations of the woodcock and quail confirm this conjecture. The woodcocks arrive in this country during the night, and hence they are sometimes found in the morning after their arrival, in a neighbouring ditch, in too weak a state to enable them to proceed. Poachers are aware that they migrate during the night, and sometimes kindle fires on the coast, to which the woodcocks, attracted by the light, bend their course, and in this manner great numbers are annually destroyed. Quails, on the other hand, perform their migrations during the day, so that the sportsman in the islands of the Mediterranean can use his dog and gun.

It has often excited surprise in the minds of some, how migrating birds could support themselves so long on wing, as to accomplish their journeys, and at the same time live without food during their voyage. These circumstances have induced many to deny the existence of migration, and have excited others to form the most extravagant theories on the subject, to account for the preservation of these birds during the winter months. But the difficulties which have been stated, are only in appearance, and vanish altogether if we attend to the rapidity of the flight of birds.

The rapidity with which a hawk and many other birds occasionally fly, is probably not less than at the rate of 150 miles in an hour. Major CARTWRIGHT, on the coast of Labrador, found, by repeated observations, that the flight of an eider duck *(Anas molissima)* was at the rate of 90 miles an hour. Sir GEORGE CALEY computes the rate of flight, even of the common crow, at nearly 25 miles an hour; and SPALLANZANI found that of the swallow completed about 92 miles, while he conjectures that the rapidity of the swift is nearly three times greater. A falcon which belonged to HENRY the Fourth of France, escaped from Fountainbleau, and in twenty-four hours afterwards was found at Malta, a distance computed to be no less than 1350 miles; a velocity nearly equal to 57 miles an hour, supposing the falcon to have been on wing the whole time. But as such birds never fly by night, and allowing the day to be at the longest, his flight was perhaps equal to 75 miles an hour. It is probable, however, says MONTAGU, that he neither had so many hours of light in the twenty four, to perform his journey, nor that he was retaken the moment of his arrival. But if we even restrict the migratory flight of birds to the rate of 50 miles an hour, how easily can they perform their most extensive migrations! And we know, in the case of woodcocks, and perhaps all other migrating birds, that they in general take advantage of a fair wind with which to perform their flights. This breeze perhaps aids them at the rate of 30 or 40 miles an hour: nay, with three times greater rapidity, even in a moderate breeze, if we are to give credit to the statement of aërial navigators, who seem to consider the rate of the motion of winds as in general stated too low.

It has been already observed, that many species do not perform their migrations at once, but reach the end of their journey by short and easy stages. There is little exertion required from such; while those who execute their movements at one flight, (if there be any that do so), may in a very short time, perhaps a day, by the help of a favourable breeze, reach the utmost limits of their journey. Many birds, we know, can subsist a long time without food; but there appears to be no necessity for supposing any such abstinence, since, as CATESBY remarked, every day affords an increase of warmth, and a supply of food. Hence we need not perplex ourselves in accounting for the continuance of their flight, or their sustenance in the course of it. Such journeys would be long indeed for any quadruped, while they are soon performed by the feathered tribes.

It is often stated as a matter of surprise, how these birds know the precise time of the year at which to execute their movements, or the direction in which to migrate. But this is merely expressing a surprise, that a kind and watchful Providence should bestow on the feathered creation powers and instincts suited to their wants, and calculated to supply them. How, we ask, does the curlew, when perched upon a neighbouring muir during the flowing of the tide, know to return at the first of the ebb, to pick up the accidental bounty of the waves? How are the sea-fowl, in hazy weather, guided to the sea-girt isles they inhabit, with food to their young, which they have procured at the distance of many miles? "The inhabitants of St. Kilda," says MARTIN, "take their measures from the flight of these fowls, when the heavens are not clear, as from a sure compass; experience shewing, that every tribe of fowls bend their course to their respective quarters, though out of sight of the isle. This appeared clearly in our gradual advances; and their motion being compared, did exactly quadrate with our compass."

In the course of these annual migrations, birds are sometimes overtaken by storms of contrary wind, and carried far from their usual course. In such cases, they stray to unknown countries, or sometimes are found at sea in a very exhausted state, clinging to the rigging of ships. Such accidents, however, seldom happen, as these birds, year after year, arrive in the same country, and even return to the same spot. The summer birds of passage return not, it is true, in such numbers as when they left us; but amidst all the dangers of their voyage, the race is preserved.

We thus see, that animals possess various resources, to enable them to accommodate themselves to the variations of temperature corresponding with the seasons. But these appear in some species to be inadequate for their protection, and another is provided for their safety.

4. *Torpidity.*—This is one of the most curious subjects in zoology, and has long occupied the attention of the natural historian and the physiologist. All animals we know require stated intervals of repose to recruit exhausted nature, and prepare for farther exertion,—a condition which is termed Sleep. But there are a few animals, which, besides this daily repose, appear to require annually some months of continued inactivity, to enable them to undergo the common fatigues of life during the remaining part of the year. These animals exhibit, therefore, two kinds of sleep,—that which they enjoy daily during the season of their activity, and that which they experience during their brumal retirement. This last kind of sleep is generally denominated *torpidity*, and is also known by the term *hybernation*, as it is evidently designed to afford protection against the cold of winter.

As the phenomena which torpid animals exhibit are somewhat different, according to the classes to which they belong, it will be more convenient for us to treat of the animals of each class separately, beginning with QUADRUPEDS.

The quadrupeds which are known to become torpid, belong exclusively to the unguiculated division. Some species are found among the *feræ*, as the different kinds of bats; the hedgehog and the tanric; while among the *glires* the torpid species are numerous, and their habits have been studied with the greatest attention, as the marmot, the hamster, and the dormouse.

The *food* of these animals is very different, according to the orders or genera to which they belong. The bats support themselves by catching insects, and those chiefly of the lepidopterous kinds; the hedgehog lives on worms and snails; while others, as the marmot and hamster, feed on roots, seeds, and herbs. They are nearly all nocturnal, or crepuscular feeders.

It is usually supposed that torpid animals are confined to the cold regions of the earth. That they abound in such regions must be admitted; but their range of latitude does not appear to be so limited as to prevent their occurrence in warm countries. Thus the *Dipus sagitta*, is equally torpid during the winter months in Egypt as in Siberia In the former country it is more easily revived by a very slight increase of temperature, its lethargy not being so profound. The tanric (*Centenes caudatus*), which is an inhabitant of India and Madagascar, becomes torpid even in those countries, and continues so during nearly six months of the year

The precise period of the year in which these animals retire to their winter quarters and become torpid, has not been ascertained with any degree of precision. The jumping mouse of Canada (*Gerbillus Canadensis*) is said to enter its torpid state in September, and to be again restored to activity in the month of May. The torpid animals of this country usually retire in October, and reappear in April. It appears probable, however, that the different species do not all retire at the same time, but, like the migrating birds, perform their movements at separate periods. It is also probable, that the time of retirement of each species varies according to the mildness or severity of the season. In general, however, they retire from active life when their food has become difficult to obtain, when the insects have fled to their hiding places, and the cold has frozen in the ground the roots and the seeds on which they subsist. At the period of their reviviscence, the insects are again sporting in the air, and the powers of vegetable life are exerted in the various processes of germination and vegetation.

Previous to their entrance into this state of lethargy, these animals select a proper place, in general assume a particular position, and even in some cases provide a small stock of food.

(*To be continued.*)

ADVICE TO YOUNG FARMERS.

ON THE APPELATIVES, QUALITIES, HABITS AND DEFECTS OF HORSES.

(*Continued from No. 44, page 345, Vol. 5.*)

Ewe or *deer necked* horses, have frequently fine shoulders, and are fast goers; and when the neck does not belly out too much, and the head is well set on, and the jaw-bones wide, they may be made to ride light in hand, and handsomely; but if they are much cock throppled, and the head is at the same time set on abruptly, they must always bear heavy on the hand. In this case, art affords no remedy; and it is only tormenting the horse fruitlessly, to attempt it: when you bear, with great force, upon the martingale, you choke him. Let it be observed, that the need of a martingale detracts considerably from the worth of a horse. I should conceive, at least, five pounds in twenty. There is a defective form, which I have often seen, but cannot well describe, called by the French, a false, or hatchet neck; it is thin, and straight along the throat, having a cavity between the top of the shoulder and the withers. Thin, loose, and swivel-necked horses, carry their heads up in the air, particularly if short headed, or tender-mouthed. When a martingale is used to palliate a natural defect, the bits, and curb, ought ever to be of the mildest. Long rainbow necks are more for beauty and ornament, than real service. They seldom belong to capital goers. It is easy to conceive, that a long and bulky neck must encumber, and retard progression, by destroying the equipoise of the machine; also, that with a shorter neck, the horse has a less distance to fetch his wind.

The form and size of the *shoulder* is obviously a point of the first importance. St. Bel, speaking of the mechanical causes, of the power of progressive motion, in every animated machine, says, "The bones and muscles are simply an apparatus of columns, levers, pullies, cords, wedges, &c. the combined operations of which occasion greater or less speed;"—and, "on the geod or bad construction of the shoulder, progression materially depends, as its motion determines that of the inferior parts. A long and oblique shoulder is the indication of speed, because, in proportion to the length and obliquity of that part, the farther the arms of the lever will be extended, and the greater will be the portion of the circle which it will describe." In order to capital action, and that the horse may extend his legs very far forward the shoulder must fall backward from a deep breast in an oblique direction (the sternum, or keel, somewhat projecting) and lessening by degrees, go fairly up to the top of the withers. Mr. Culley, whose observations have always weight, is partial to horses wide a-top, upon the withers; and supposing the shoulders to be, at the same time, very obliquely placed, there can be no doubt but such horses will carry greater weight, in proportion, and with equal speed. They are also, in general, easy goers. The famous Mother Neesom, according to Bracken's account, was so shaped; and I have known some such, with capital action: but this is rare, such forms being, in general, straight shouldered, and wide chested, and by no means distinguished for speed.

The extreme obliquity, or slant of the shoulder, it must be observed, is requisite only for the running horse, and even amongst them, it is rare; extent of shoulder, providing it be flat and deep, or considerable, (always conferring proportional powers of progression. The straight heavy-shouldered horse is, evidently, unfit for any purpose, but slow draft; both the weight, simply considered, and its mal-position, impeding progression. This accounts for well shaped horses being more capable of high weights, than others with much greater shew of substance.

A high and well placed shoulder is accompanied with all sorts of advantages, of which it is a very eminent one, that a proper place is there by secured for the saddle, without the use of a crupper, the need of which, as well as of a martingale, decreases the value of a horse I have said that the shoulder blades ought to reach up to the top of the withers, diminishing gradually, that the withers be not too thick and wide. But this indeed is a rare perfection. Many, which are esteemed good shoulders, have a cavity between their upper extremity and the withers, admitting the saddle too forward, and bringing the weight too far before the centre.

The least experienced eye will readily determine, whether a horse be *leggy*, or too high upon the leg. It is very apparent, when the legs form the most conspicuous part, and appear too long for the carcase. The horse is weak in proportion, but it detracts more from strength and continuance than speed. The legs being very short, is also a defect, and of a contrary tendency. But legs are never too long, when the horse is sufficiently deep in the carcase.

The *knees* must be wide and strong, but lean, and free from puffiness; the hair bear no vestige of derangement. A nice eye will instantly detect any accident which may have happened to the kness from a fall, even if years have since intervened; there will be either an inequality of the surface, a few staring hairs, or those which have grown after a cut, will be of a different colour, or will be too long, and so not lie level with the rest. The back part, or bend of the knee, is the situation of *mallenders*, or *chops*; the inner side somewhat below it, of the speedy cut, which is occasioned by strokes of the hoof in going If the wounds have been healed, an excrescence will be distinguished by the finger, or the hair will appear to stare. Trembling knees denote injury, from excess of labour, which is generally without remedy. *Osletts* are long excrescences situated under the knee, on the inside, and sometimes contract the joint. Splents are of the same nature; their place is upon the shank; they are sufficiently palpable, either to sight or feeling, but of no detriment, when they do not interfere with the sinews. They seldom increase in size, after six years old. When they are so placed as to contract the sinews, it is much the cheapest and safest way to deem them incurable.

If the legs be round and fleshy, and no preternatural heat, or extraordinary pulsation is to be discovered in them, by handling, it may be their natural shape. They will be subject to grease and scratches, and belong to a horse of inferior kind. A good flat leg may have become round, hot, and swelled, either by over work, or the want of it, and from standing week after week, tied up in a hot stable. The horse may shift and change his feet, from the pain in his legs, and yet the main sinew may not have sustained any material injury; for when that has really happened, he will be sure to inform you of it, by putting his leg and foot forward, in a loose, faint, and faltering way. If he stand thrusting out his fore-leg boldly, as if from wantonness, and resting on his heels, he is groggy; that is to say, his sinews are contracted, or his feet battered. To try how far the horse has been injured, let him be walked about for half an hour, when the swelling of his legs will, in all probability, subside. If you then observe the *tendo achillis*; or main sinew, distinct from the shank; if on pressing it with the finger towards the bone, you find it firm, and tense; if you discover by the feel, no soft, spongy sinews between the shank and the tendon, no extraordinary pulsation, but that all is well braced and wiry, you may conclude the swellings not dangerous. A person of experience, with a nice and discriminating finger, will scarcely ever fail to detect lameness in the back sinews; but I must declare, that I have never yet in my life met with such persons among common grooms, and farriers, who never attend to any other symptoms in these cases, than heat and tension; whereas those symptoms may have prevailed. in a very slight degree, or may be past, and the sinews remain in a very lax and unsound state. I met with a remarkable example of this very lately. Two men were returning from the house of a veterinary practitioner of some note, with a fine young coach horse, which went lame. Upon enquiry, he had been lame sometime, and neither themselves, their master, nor the doctor, could possibly discover the seat of his lameness, but they had blistered his pastern joints. and taken several other steps at a hazard I examined him out of curiosity. He had scarcely stood still a minute before he set his near fore-leg out. I found the foot and joint perfectly cool, and apparently without complaint. I had him walked upon soft ground, and observed, he *threw his fore-arms freely, and far enough forward*, by which I was convinced of the soundness of his shoulders. On pressing the back sinew of the near fore-leg, the horse flinched, and on farther examination, I found the sinews soft and flabby, with some little heat and beating. It was in vain that I communicated this discovery to the men, or that I demanded of them, whether, independent of other ailments, which they supposed the horse might have, that which I had found was not sufficient to make him halt? No. One said he was lame behind, the other, that the lameness was in his shoulder, and that he knew a farrier who could remove it at a certainty.

There seems a strange disposition in the stable people, to attribute effects to occult and imaginary causes, when the real ones are so obvious, that one would wonder how common sense could possibly avoid stumbling upon them. Horses, which plainly tell of themselves, that they are lame from hard and hot feet, and overstrained back-sinews, are usually contradicted by their keepers or doctors, who rather choose they should be lame in the shoulders. Should the chest be of a peculiar thin make, and have a cavity in front, the business is done at once and the case declared a chest-founder. That disease is then perhaps hereditary, as I have more than once seen foals, of only a few days old, with the said cavity, and all the appearances of a wasted chest. To be serious, I have also seen a case of a recent and sudden foot founder, with the chest remarkably shrunk, and a violent palpitation in the cavity, for which Osmer accounts very rationally. The shoulders seldom receive any other damage from labour, than concussions, which occasion stiffness and cramp. It is very plain that the articulations of the lower joints and the hoofs, enduring the severest service from being obliged to support the whole natural and imposed weight, must be most exposed to accidents.

When the horse wounds his pastern joints, in going, it is called *knocking*. If the places be healed, an escar will be discovered by the finger, or the fresh-grown hair will be long and uneven. The speedy cut, and knock are capital defects in horses, the former natural, and past all remedy, the latter so likewise, except it be the consequence of weakness and low condition. The width of a horse's chest is no security against knocking, nor is it occasioned by the narrowness of the chest, the stroke being given by the toe or heel; of course those horses are liable to it, which turn the toe either out or in. In the latter case, they are styled *pigeon-toed*. In a natural defect of this kind, it is ever productive of disappointment and mischief to listen to the proposed remedies of grooms and smiths from shoeing; since your horse would knock, or cut in the speed, with his hoofs, if ridden without shoes. The only remedy is never to ride him without those round leather guards, which have of late years been adopted. To be properly formed for action, a horse ought to go with his feet as near together before, as possible, without brushing the hair, and proportionally wide behind. When they proceed in the contrary form, a case by much too frequent, they are said to go with the wrong end first.

(To be continued.)

FROM THE NEW ENGLAND FARMER.

I am induced to hand you the enclosed extract for publication, from an impression that some of the remarks are so *apposite* to the present juncture, that they ought to be in possession of the public. And this motive I trust, will secure a pardon from my friend for the liberty thus taken It may be thought, sir, that the time has arrived for the FARMERS and PLANTERS of the Union, to *begin* to ask the Government for a share of protection so strenuously demanded by a portion of their fellow citizens engaged in other pursuits.

Should your publication of the letter, meet the eye of the estimable gentleman at the head of the Agricultural Committee of the House of Representatives in Congress, he will recognise the writer as one of the most systematic and efficient farmers, upon a very extensive scale, in the United States. Your's truly,

S. W. POMEROY.

Brighton, Jan. 8, 1824.

" *Genesee, Livingston Co. N. Y.* 8*th Dec.* 1823.

"DEAR SIR,—I received a few days since, a "New England Farmer." Judging from one number, I should think it a well selected and judicious paper.

"I doubt whether I should agree with the Editor in recommending the cultivation of roots for cattle. You know my axiom is, that the process of farming (I wish I had a better word at command) must be regulated by the price of produce. The same paper which recommends the culture of mangel wurtzel, quotes the price of the best pieces of beef at eight cents: reducing the average probably to four cents. I am deceived if it is possible to feed cattle with roots and sell the beef at four or five cents, without a loss:—if so, I believe *Say* would pronounce the root culture an unproductive operation. I am not insensible to the fascinating appearance of any section of our country, cultivated nearly in the style of horticulture; but its counterpart I am afraid ever must be pauperism in most of its painful forms. Farmers pursue their interest—not always—but more generally than you, gentlemen farmers imagine. The nett income of our farmers is miserably small—they cannot afford ornamental husbandry. Labor, says Washington in his letters to Young, is every thing with us, and land nothing. I do not say but you can feed your cows near Boston, cheaper on roots than with hay: I doubt it however:—But I can raise cattle in Ohio and sell them at such prices as will ruin a root-feeder, twenty miles distant from Boston.

"Our manufacturers are earning double the amount of farmers of equal capital. Government is paying them a bounty of 30 per cent. on their products—while the good natured farmer jogs on, quite contented with an occasional treat of splendid declamation in praise of rural life.

"I am doubtful as to the expediency of small premiums on cattle; I think the raising of these animals may be left to self interest. Suppose you take a hint from Napoleon, and offer very liberal rewards for great improvements in agricultural implements. The cast-iron ploughs even now cause a saving to the U. S. of at least $60,000 a year—(here is a million saved for other objects.) Our Blacksmiths have lost about one third of their customers' work which was expended in laying and sharpening plough irons, &c.—We have a threshing mill in this village now in use, which operates perfectly well and saves one half the expenses of manual threshing. It may be transported in a wagon—costs about $60.—We wonder why the Romans did not think of stirrups; and it is a little wonderful that the cast iron plough in its present form has not before been introduced. There ought to be national premiums for great objects that would excite attention through the U. S.—$10,000 for a flax dressing machine, if it brought one to light, would save half a million a year. Agricultural labor is not up to the lights of the age—while mechanical labor since Arkwright began to spin cotton, has been increased many hundred fold. There are many processes in farming which invite the aid of mechanical inventions; for instance, mowing, threshing, cradling, flax-dressing, &c. Mr. Whitney, of New Haven, made a present to the cotton growing sections of the southern States of a machine, equal in value to the yearly labor of one fourth of the black population. I mention it to show what remains to be done, to abridge the rural labor of the northern and middle States.

"I am, &c.

JAS. WADSWORTH.

"*Samuel H. Pomeroy, Esq.*"

PENNSYLVANIA AGRICULTURAL SOCIETY.

At a meeting held on Saturday, the 10th of January, in conformity with the act of Incorporation, the officers for the ensuing year were elected, viz.

President—Jonathan Roberts.

Vice Presidents.

William Harris,
James Worth.
Stephen Duncan,
George Sheaff,
Thomas Serrill.

Corresponding Secretary—John Hare Powel.
Treasurer—George Blight.
Counsellor—Levi Pawling.

Directors.

William Darlington,
Manuel Eyre,
Elijah Lewis,
William Evans,
Joseph George,
Matthew Roberts,
Richard B. Jones,
Thomas Smith, of Delaware County.
John Wilcox,
George W. Holstein,
Job Roberts,
Algernon Logan,
Jesse Kersey,
Samuel West,
Samuel Davis,
John G. Watmough,
John Elliott, of Montgomery County.
Reuben Haines,
Henry L. Waddell,
Enos Morris.

Recording Secretary—Joseph Kersey.

Assistant Recording Secretaries.

John P. Milnor,
Henry Serrill.

A communication was made by John Hare Powel, accompanied by affidavits and certificates from a surveyor and various persons, showing that he had raised in the last autumn on one hundred and seventy-four perches of his farm land, sixteen hundred and thirty-four bushels of Mangel Wurtzel Roots, free from dirt and closely cut beneath the crowns, equal to fifteen hundred and two bushels, weighing 32 tons, 3 cwt. 2 qrs. 23 lbs. per acre.

Communications were presented by the Corresponding Secretary, and ordered to be printed, viz:

On wheat crops and Hessian fly, on fences, on peach trees, on the effects of Lightning—by *James Worth*, of Buck's County.

On Alderney cattle, on peach trees—by *Reuben Haines*, of Philadelphia County.

Letter from G. W. Featherstonhaugh, Esq. Corresponding Secretary of the New York Agricultural Board, to John Hare Powel, on cattle and their management.

John Hare Powel's reply.

On the effects of lightning—by *Matthew Roberts*, of Montgomery County.

On manures, on hay houses and securing hay, on various breeds of cattle, on millet, on the cultivation and uses of mangel wurtzel, on the advantages of deep ploughing—by *John Hare Powel*, of Philadelphia County.

On the properties of improved short horn cattle as deep milkers—by *Henry A. Carpenter*, of Lancaster County.

On the management of Indian corn crops—by *Joseph Kersey*, of Chester County.

On the extraordinary effect of mangel wurtzel upon the quality of butter—by *James G. Thompson*, of Philadelphia county.

The Society determined to award premiums at their next Annual Exhibition, for neat cattle, sheep, horses, swine, crops, butter, cheese, maple sugar. potash, domestic wine, cider, implements of husbandry,. ploughmen, and animals at the plough, and household manufactures, under certain stipulations.

From the Minutes.

JOHN P. MILNOR,
Assistant Recording Secretary.

OBSERVATIONS

ON A REMARKABLE DISEASE AMONG CATTLE, AND ITS PROPAGATION TO THE HUMAN SPECIES.

By J. Kercheval, M. D. of Bardstown, Kentucky.

I have lately witnessed some cases of an anomalous and extraordinary disease, which appeared to proceed from an infection communicated by the bodies of cattle that had died of a singular and fatal disease that raged among them.

This disease first made its appearance among the cattle of this neighbourhood during the summer of 1819, and its fatality was so great that horses, cows and sheep, were alike the victims of its fury. Cattle brought to the fold in the morning apparently in good health died before noon; and many that had taken their accustomed food in the evening were found dead in the morning; nay, those grazing in the fields, but half an hour before, were seen writhing under the pangs of death, and dying in a few minutes.—Death in such cases was often attended with violent agitations, and manifestations of the most agonising distress.

The external signs of disease, were an intumescence, sometimes originating in the throat, but generally commencing at the breast and extending along the sides to the flanks, and uniting across the lumber regions. These swellings were soft and elastic, resembling inflations, and upon post mortem examination, were found to contain extravasations of grumous blood, and effusions of coagulable lymph, and were of a dark and gangrenous appearance. The blood in some instances was so dissolved that it transuded through the pores of the skin.

Such were the prominent features of this most deadly distemper. Alike novel in its character and unique in fatility, it is viewed here, as a new disease; nor is my knowledge of veterinary pathology sufficient to enable me to assign its appropriate rank among the many maladies of our domestic animals.

In the human subject this disease, or at least one which was derived from it, commenced in a small and circumscribed vesicle, containing a dark and turbid fluid, exhibiting an appearance not unlike that which is sometimes excited by the first effects of spurious vaccine matter.—This cuticular elevation extending itself equally in every direction, formed a circular and progressive margin to the ulcer, and as it receded the centre become livid, black, and finally sphacelated. This gangrenous spot become encompassed in the course of its progress with a hard swelling of very great extent, attended with a peculiar torpidity and loss of sensorial power in the part.

Almost simultaneous with the appearance of local affection, the entire system become more or less deranged. The constitutional affection commenced by chills and rigors, these were soon succeeded by febrile excitement, attended with dull aching pains in the joints and extremities, headach, and a distressing sensation of pains along the course of the spine. In one instance petechiæ appeared upon the skin. All these symptoms were accompanied by much prostration of the vital powers, and the disease exhibited a train of phenomena, altogether novel and perplexing.

In the treatment of this malady, after a few general remedies adapted to the state of the system, my attention was more immediately directed to the local affections. With a view, therefore, of bringing the remedial articles to act more immediately upon the subjacent parts, I removed, by excision, the superincumbent dead parts. Although in several instances this was effected in considerable masses, yet such was the insensibility of the parts, that the scalpel gave little or no pain, nor did the most potent stimuli and antiseptics excite, for some days, the slightest sensation.

The carbonate of potash in substance and a saturated solution of the muriate of ammonia in vinegar appeared to be beneficial as applications to the diseased parts. I also derived advantage I thought, from dressings dipped in the compound tincture of myrrh and aloes, covering at the same time the contiguous surface with stupes out of cold aqueous solutions of acet. plumb.

Although the ulcers were extremely malignant and inveterate, yet by rigidly persisting in this treatment, at the end of five or six days, a circumscribed margin of red and healthy granulations announced, in every case, the arrest of the gangrene and restoration of the healthy action of the parts surrounding the slough. During the process of sloughing, I applied the submuriate of mercury to the part, and exhibited pulv. cinchom with evident good effect.

With regard to the origin and character of this disease, it may be observed, that *no one* was affected with it, who had not been previously engaged in flaying or otherwise handling and touching the carcase of an animal that had died of the distemper described. In three out of four persons, in whom the disease occurred, it made its first appearance upon the fore arms. In the fourth the gangrenous pustules appeared on the cheek. All persons, however, who were thus employed upon the carcases of animals, were not affected with this disease. Nor did I hear of any person of colour having received the disease. This may have been owing to the morbific virus not coming in contact with sensible or absorbent parts, for want, in those instances, of a scratch, or abrasion of the skin.

TO THE EDITOR OF THE AMERICAN FARMER.

SCORCHING OFF THE HAIR OF HOGS,

BETTER THAN SCALDING, FOR BACON.

Mr. Skinner,

In the 4th vol. of the American Farmer, page 223, there is an account of the English mode of cleaning hogs by singing, which states that the quality of the bacon cleaned in this manner, was in much higher estimation, than that prepared in the ordinary way by scalding. My informant was Mr. James Scearley, a butcher, a few years since from England, now a resident at "Fells Point." In the Edinburgh review of February, 1823, in an essay reviewing "Cobbett's Cottage Economy," page 115, there is a portion of Cobbett's works extracted, which details the English (or more properly the Hampshire) mode of cleaning by singing. As to my taste, no one is perfectly competent to give Cobbett's meaning in as satisfactory way as this singular man himself. I will extract so much of the "extract," as gives an account of cleaning hogs by singing, hoping that Cobbett's *manner* of relating may attract attention, and cause some one to make an experiment, and give us through the medium of your paper, the result of their experiments. Cobbett's words are, "there are two ways of going to work to make bacon; in the one you take off the hair by *scalding*, this is the practice in most parts of England, and all over America. But the *Hampshire way*, and the *best way* is to *burn the hair off*— there is a great deal of difference in the consequences. The first method slackens the skin, opens all the pores of it, makes it loose and flabby by drawing out the roots of the hair. The second tightens the skin in every part, contracts all the sinews and the veins in the skin, makes the flitch a solider thing, and the skin a better protection to the meat. The taste of the meat is very different from that of a scalded hog—and to this chiefly, it was, that Hampshire bacon owed its reputation for excellence. As the hair is *burnt off*, it must be *dry*, and care must be taken that the hog be kept on dry litter of some sort, the day previous to killing. When killed he is laid upon a narrow bed of straw not wider than his carcase, and only two or three inches thick. He is then covered all over thinly with straw, to which, according as the wind may be, the fire is put at one end. As the straw burns it burns the hair. It requires two or three coverings and burnings, and care is taken that the skin be not in any part burnt or parched. When the hair is all burnt off close, the hog is *scraped* clean, but never touched with *water*. The upper side being finished, the hog is turned over, and the other side is treated in like manner This work should always be done *before day light*—for in the daylight, you cannot so nicely discover whether the hair be burnt off. The light of the fire is weakened by that of the day. Besides it makes the boys get up very early for once at any rate—and that is something—for boys always like a bonfire."

Thus far Cobbett—for the sequel of his remarks contained in the extract, your readers are referred to the work as quoted. Let me observe that in my communication published as stated in the 4th vol. of the Farmer—that there is a typographical error, which I will beg leave to correct—towards the close, read "*Maryland lady*," instead of "merry landlady."

Your's, &c.
RUS-IN-URBE.

Baltimore, July 10th, 1824.

TO THE EDITOR OF THE AMERICAN FARMER.

MAN-POWER.

Sir,

In a late communication, I pointed out the simplest mode that occurred to me, for comparing the power of any mechanical agent with that of a man or horse, when drawing horizontally to the greatest advantage. I will now proceed to state, and compare, the different degrees of force which an active labouring man can exert, under different circumstances. For this purpose it will be requisite to have some fixed standard of comparison. Now it has been fully ascertained that an active labouring man, working to the greatest advantages, and without impediment, can, on a moderate estimation, raise 10 lbs. avoirdupois, through 10 feet, in a second, for 10 hours per day:—or 100 lbs. which is the weight of 12 gallons of water, through 1 foot; or through 36,000 feet in one working day of ten hours. If, therefore, the weight raised, be multiplied into the height through which it is raised; that is, 100 lbs. into 36,000 feet, the product 3,600,000, will express the daily labour of a man when acting under the most favourable circumstances: and its one-thousandth part, 360, will answer the same purpose, and be much more convenient.

It has long since been ascertained that a man of ordinary strength, can turn a winch through 3½ feet per second, and overcome a resistance of 30 lbs. and continue the exertion for ten hours in the day without injury. His daily labour therefore, reduced to the above standard would be 378; or 1 2′ more than the standard; again, it is known that two men at a winch, with handles at right angles to each other, can raise 70 lbs. with greater ease than one can raise 30. This reduced to our standard of 360 will be 439 1-5.

A man can raise by means of a good common pump, a hogshead of water 10 feet high, in a minute, and work 10 hours per day. Now, since 12 gallons weighs 100 lbs. 63 must weigh 525; he will therefore in ten hours or 600 minutes, raise 600 hhds. weighing 315,000 lbs. to the height of 10 feet, which gives 315, for the measure of his daily labour at pumping.

A feeble old man in St. Petersburg, raised 7 cubic feet, (437½ lbs.) of water 11½ feet high, in one minute, for 9 hours per day, by walking backward and forward on a lever, to whose extremities pump-rods were connected. This gives 271, for the measure of his day's labour; which if continued 10 hours would be 301.

A young man weighing 135 lbs. and carrying 30 lbs. raised 9¼ cubic feet to the same height every minute, for ten hours in the day, without fatigue: the measure of his day's labour will be found to be 391.

If the force which a man can exert when turning a winch be expressed by 100; then his force in pumping will be 61; ringing a bell 136; and in rowing a boat 143. The last of these appears to be the greatest that the human body can exert.

When a man ascends a flight of stairs without any load, his velocity and action is the greatest; but he produces no useful effect. If he be loaded with twice his own weight, he is unable to ascend. Between these extremes, as in hauling horizontally, there is a mean load with which he can ascend, and in a given time, produce the greatest *useful effect.* This load, for a stout, active labouring man, will be about three-fourths of his weight: and the same will be the most advantageous load when he travels horizontally; but if he return unloaded to carry away another load, he will produce the most useful effect, when the load is nine-tenths of his own weight.

When a man ascends stairs without a load, the quantity of mechanical action; that is, the weight (of his body) raised, multiplied into the velocity with which he ascends, exceeds that when he carries three-fourths of his weight, in the proportion of nearly four to one. Consequently three-fourths of his labour is lost in this application of his strength: and it will cost four times as much as that of a man who will ascend the stairs without any load, and then raise a weight by allowing himself to descend, by the force of gravitation, through the height to which he had ascended

The act of turning a *tread mill* is precisely similar to that of ascending stairs, and consequently a man's labour will be four times more beneficially expended on it, when he sustains no weight but that of his own body, than if he carried in addition a weight, equal to three-fourths of his own.

The expenditure of muscular action, and consequently, the fatigue, in ascending stairs, even without any load is very great. It is demonstrable, that to ascend 13½ feet, requires as much exertion, as to walk 230 feet on a level road. Indeed this application of man's strength, even when producing the greatest useful effect, is very unprofitable, the measure of his daily labour being no more than 148, which is less than one-half the effect of the "feeble old man," walking on the lever.

Thus it appears, that the quantity of useful labour, which a man's strength will afford, is very different, according to the mode in which it is applied. His peculiar conformation, assisted by his ingenuity, enables him to exert his physical powers in an endless variety of ways. The case is very different with other animals; but of this on some future occasion.

Your's respectfully,
J. D. C.

Extracts from late Numbers of The London Farmer's Journal, received at the Office of the American Farmer.

An ACCOUNT of the NUMBER of CATTLE and SHEEP sold in SMITHFIELD MARKET, in each year since 1789 (vide Parliamentary Paper, No. 350, 1823,) and of the Average Prices of Wheat, as stated in the *Gazette.*

Years.	No. of Cattle.	No. of Sheep.	Average price of Wheat.	
			s.	d.
1790	103,708	749,600		
1	101,164	740,360		
2	107,348	760,859	41	0
3	116,848	728,480	48	11
4	109,448	719,420	51	8
5	131,092	745,640	74	2
6	117,152	758,840	77	1
7	108,377	693,510	53	1
8	107,470	753,010	50	3
9	122,986	834,400	67	6
1800	125,073	842,210	113	7
1	134 546	760,560	118	3
2	126,389	743,470	67	5
3	117,551	789,430	56	6
4	113,019	903,940	60	1
5	125,043	912,410	87	10
6	120,250	858,570	77	0
7	134,326	924,030	73	3
8	144,042	1,015,280	79	0
9	137,600	989,250	95	7
1810	132,155	962,750	106	2
11	125,012	966,400	94	6
12	133,854	953,630	125	5
13	137,770	891,240	108	9
14	135,071	870,880	73	0
15	124,948	962,840	64	4
16	120,439	968,560	75	10
17	129,888	1,044,710	94	9
18	138,047	963,250	84	1
19	135,226	949,900	73	0
1820	132,933	947,990	65	7
1	142,133	1,107,230	56	6
2	142,043	1,340,160	43	3
3			55s to 60s	
	123,293*	786,730*		
	138,076†	1,061,706†		
	174,637‡	1,114,370‡		
	32,561§	53,664§		

* Average of five years, 1798 to 1802, for a population of 900,000.

† Ditto, ditto, 1818 to 1822, for a population of 1,274,000.

‡ Quantity required by increase of population.

§ Annual diminution of supply, in proportion to increase of population.

ON STORING MANGEL WURTZEL.

North Creek, Burnham, Norfolk,
August 23, 1823.

SIR—Lest your correspondent's letter in this week's Journal on mangel wurtzel should mislead the growers of that root, by stating that it will stand the frost, I would beg leave to caution them against trying the experiment, lest they should meet with a serious loss. If they are a good crop and well covered with tops, I believe they will stand the frost as well as our common white turnips. Some gentlemen in this part of Norfolk about seven or eight years since, grew a fine crop; they were valued by a surveyor at £12 per acre, and the turnips on the same farms at three or four pounds. They were advised to take them up and store them for spring feed; their mode of doing it was, all the tops were taken off, the roots were then taken from the ground, and left in small heaps to be carted home when a convenient opportunity offered; a sharp frost caught them in that situation in the end of November, and destroyed their whole crop to the amount of several acres; this made them so angry that I believe not one of them have grown any since. Many acres have since that time been grown near them and much approved of. I have some roots now by me very sound and good, that were planted in July 1822, after my hay was taken off: the rows, three feet apart, were covered up by the plough in autumn, and remained there all winter. I had also some that were not moulded up, but had a heavy crop of tops that stood till the spring, although the winter was very severe, but these were eaten off by my cows as soon as the frost broke up, or I believe they would have rotted very soon. If our common white turnips were topped and taken from the ground, a slight frost would destroy them as soon as it would the mangel wurtzel; for that part of the roots that grow in the ground is very tender and susceptible to the frost. I store the greater part of mine. We take no more tops off than we cart roots to the heap in the day, commencing as early in November as we can Two carts, three horses, six or eight women or youths to load, and a man to drive them to the heap, will remove a great many in a day The driver shoots them out of the end of the cart, or tumbril, in a promiscuous way, on as high a heap as he can, about two loads deep, on the level ground in some sheltered situation; he continues to add to that heap in the same way he began, till he has got as long a ridge as he wants; the scattered ones are then thrown upon the top of the heap to as sharp a point as they can conveniently be laid; as much straw must then be scattered over them as will prevent the mould from mixing with them. The ground round the heap, with the carts and treading of the horses, is pressed so close as to be difficult to dig. I plough as many deep furrows round the heap as I want mould to cover it, about six or seven inches; it is then harrowed and rolled till fine, then ploughed a second time, beginning each time next the heap; by this means the mould is brought to it, and in its fine state is easily cast over them with a shovel, for the lighter and finer the mould is, the better it will resist the frost. I prefer this method to putting them into a hole, as the practice is with some, because the waters are carried from the heap into the trench; in the latter case they fall into the trench amongst the roots: I have preserved them good till after Midsummer, and have found them useful for stock in a dry season, when the grasses fail. The ground cleared at this time is ready for sowing wheat, or to be ploughed, and remain the winter for a spring crop. I have seen heavy crops of barley where the tops have been ploughed in, but I prefer giving them to the stock, as they eat them with avidity. My people are now reaping wheat that was sown after the mangel wurtzels were taken off last November; it is laid at twelve coombs per acre. Your *Surry Correspondent*, in a recent letter in your Journal, is very much mistaken respecting the fattening qualities of the mangel wurtzel. I heard a respectable grazier state, in a public market, that he made a quantity of beasts fat this last spring, with these roots in the shortest time he ever saw any fatted before with any thing. I have some friends who have regularly fatted beasts for the London market several years, who all concur in the same opinion. I feed my cows, horses, and pigs with them, and find them very nutritious. I am, Sir, your's respectfully,

THOS. HEROD.

History of a German Bed.—"Imagine a young Frenchwoman accustomed to sleep between two sheets, and finding for her bed in her German bed chamber a large feather mattress, *under which* was concealed a very small sheet. I called up my hostess, but was a long time labouring to make her understand my complaint. Her custom had been to sleep under the mattress. I made signs to her to fetch me a quilt; she did so, but with the most inconceivable obstinacy persisted in placing it under the mattress in question. This scene at length became so ridiculous, that I could no longer conceal my laughter, but I was obliged to make my bed over again, and the surprise of my hostess was not a little at seeing me place the sheets *upon* the feather-bed, and the quilt *over* the sheets. We parted in mutual admiration."

Editorial Correspondence.

Extract of a letter from Dr. J. S. Spence, to the Editor, dated Washington, Jannary 17, 1824

"While on this subject, it may not be out of place to state, that there is perhaps no grain, which is sought for more eagerly, by domestic fowls, and mice, than the millet. I am certain that either family, would leave corn or wheat, to feed upon it"

"I feel interested in the other subject of your note. These destroyers of our fish, whilst entangled in the net, are enemies of recent appearance in our waters.* But although, the entomologist, may assign to them their name, and lineage, little actual benefit will result to the fisherman. Like other tiny pests, they are too powerful in the aggregate, to be eluded, or destroyed. I will write very soon, to a neighbour who was first to detect, and complain of their unkindness, to *drown* some of them in spirit, and imprison others, giving them the sole comfort of their own salt water. It is almost certain, that you will have a view of them, in a state so active, and with eyes so clear, as to convince you, that they can be mischievous."

"I enclose some seed, from grapes which grew on the side of a swamp, entirely open to, and a little more than a mile distant from the Atlantic. I could say something of the beauty of the vine, branching within a foot of the ground, and covering the tops of three oaks, of moderate height; but, my object is, to put you in possession of the seeds of a grape, which certainly contain more saccharine matter, than any of the natives which I have ever seen. I was aware that I should not be at home, for cuttings.

Your's truly,
JOHN S. SPENCE.

JOHN S. SKINNER, ESQ."

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* The Editor had been informed by Major Pridcaux of the Maryland Executive, that within a few years past a singular species of insects, or vermin, had appeared in the waters on the sea board of Worcester county; which, entering by the mouth, in great numbers, thoroughly devours the fish, which they find entangled by the gills in the gill nets; but what is remarkable, they do not break the skin; so that though not a particle of the interior remains, except the bone, the skin being filled with water, has the appearance of being a plump fine fish, until taken up, it is found to be nothing but skin and bone. Is it not probable, that this piscivorous depredator upon the hopes of the fisherman, is the *sea louse*, spoken of in Capt. Parry's last expedition to the North pole; to which recourse was had, *to make skeletons* of such birds, or animals as they desired to preserve, by placing them under the ice, in the way of these ravenous devourers of fish and *flesh?*

The grape seed, being few in number, have already been divided amongst John Lowell, Esq. of Massachusetts, Col. George Gibbs, New York, Major Adlum, Georgetown, D. C., and N. Hervemont, Esq. of South Carolina.

Edit. Am. Farmer.

Extract of a letter from a correspondent near Washington, Georgia.

"The corn crops in the state, from Augusta, westward, are very abundant, almost without a parallel in production. The cotton crops are not so extensive (as to acres,) as formerly, say as three to five, but the production per acre is unusually large, and the cotton I think, is of a fairer quality, as to staple and appearance, than is common."

DISEASES OF HORSES AND CATTLE.

Paris, Bed. Co. Ky. Dec. 22, 1823.

Do not think, my dear sir, because I almost invariably address you on the subject of horses' diseases, that I am, therefore, a professed horse jockey;—believe me the conclusion would be erroneous.

I am feelingly alive to all the distresses of animated creation; but more especially to that noble animal a horse. It is to his subjection, and labour, our farmers owe their rich and luxuriant crops, the pleasure of being whirled about in their carriages, the graces of horsemanship, and the high entertainment of well matched races.

From all these considerations I naturally infer that relieving such an useful creature, would result in benefitting man, and would impart pleasure to him in the exercise of that tenderness and humanity, God has for wise purposes, implanted in his nature.

On travelling through one quarter of Kentucky, I was informed by a respectable and wealthy farmer, the "*Founder*," was cured by rubbing the hoofs, and pasterns of the afflicted creature with spirits of turpentine, and also, rubbing it over his nose, at the same time.

I saw lately a paragraph in the National Intelligencer, describing a disease in cattle, in Montgomery County, Md. or else where, and describing its mode of attack.

Some fine horned cattle have been afflicted in the same manner in this neighbourhood, and every remedy tried, has failed of curing them of the visitation and violence with which they are seized, and death only had power to quiet them.

After investigating every obvious cause, it has been found out to a certainty (I am creditably informed) that feeding cattle with cut up corn, with *hogs* in the same pen, or pasture, communicates the disease. I will give you no philosophical reasons on the subject; you can examine the pro's and con's at your leisure. I hasten to let you know the fact; perhaps the hints I have given, may in some way be serviceable

"Procrastination" is a great evil, and from some reason I cannot now explain, perhaps diffidence, or some other feeling had a part in it; but however, or whatever it may be, I have delayed longer than I ought, sending this communication. Your friend, respectfully,

S. B. D.

N. B. The description of the "*bee chest*," with any thing else connected with that interesting insect, will be acceptable.—*Edit. Am. Far.*

MR. SKINNER,

I believe it is now more than six months since I saw in your paper, a respectful call on Dr. S. Black, for a statement of the effects of his system of improvement, for the four years which have passed since his essay on the intrinsic value of land was published. Being one of those who had read that essay with pleasure, I was anxious to know the present impression of its ingenious author—and confidently expected a reply to the question of your unknown correspondent: but the time which has elapsed, shews that the expectation was vain. This silence of the author, amounts to confessing his doctrine to be false; and by allowing this impression on the public mind, he does injustice to his essay, which (notwithstanding his silence) I still think well of.

Every writer on agriculture is apt to deceive himself, and consequently to deceive his readers. No one should be blamed for this fault, when he commits it, in attempting to disseminate true and useful knowlege. But whenever he discovers that he was mistaken, it is his duty to undeceive his former readers by a frank and voluntary avowal of his mistake. Such a course would command our approbation; and even the most distinguished writers on agriculture would be raised instead of being lessened in our esteem, by their giving such proofs of their love of truth, and freedom from prejudice. By adopting the opposite course, they become guilty of intentional fraud on the public. R.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Pig Point Inspection Warehouse, during the quarter, commencing the fifth day of October, eighteen hundred and twenty-three, and ending the fifth day of January, eighteen hundred and twenty-four.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	154			154
Number delivered.	232			232

GASSAWAY PINDELL, Inspector.

TREASURY OFFICE, ANNAPOLIS, Jan. 13, 1824.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Queen Anne Inspection Warehouse, during the quarter, commencing on the sixth day of October, eighteen hundred and twenty-three, and ending on the fifth day of January, eighteen hundred and twenty-four.

	Domestic growth	Growth not of this state.	Re-inspected.	Total.
Number inspected.	40			40
Number delivered.	180			180

WELLS & TYLER, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Jan. 13, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Nottingham Inspection Warehouse, commencing on the first day of October, eighteen hundred and twenty three, and ending on the thirty-first day of December, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	76		.	76
Number delivered.	261			261

BADEN & BOSWELL, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Jan. 6, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

* * *

Lost hours.—One person rises in the morning at half past nine, another at six. If each live to be fifty years old, the one will have enjoyed sixty-three thousand eight hundred and seventy-five hours, or *two thousand six hundred and sixty-one days* more than the other. Let us suppose, that there are throughout Great Britain, one million five hundred thousand persons who rise at a quarter past nine, *or later.* Of these, perhaps, nine hundred and fifty thousand would, if they rose at six, be usefully employed. At this rate, fifty-six thousand three hundred and forty-six millions, eight hundred and seventy-five thousand hours, or six millions four hundred and thirty-two thousand two hundred and ninety-two years of individual improvement are lost to society every half century.—This is supposing, that these nine hundred and fifty thousand get up at a quarter past nine, whereas thousands do not leave their beds till eleven or twelve.

All this time is uninterrupted day, and composed of hours in which the intellect is far clearer and more fit for study, than the rest of the day.

It must be remembered, too, that nothing conduces more to health, and consequently to longevity, than early rising.

Suppose, out of the above number of persons, five hundred thousand should live four years longer than they otherwise would have done, viz. fifty four years instead of fifty; according to the ratio above, here are *two millions* more years of actual existence utterly wasted.

By a letter from a respectable citizen of New Jersey, dated the 23d December, we learn, that a manufactory for converting iron into steel, has recently been commenced in that city, which produces as *good, as firm and as beautiful steel* as any imported from England or Germany, and that too from Morris county iron. The best of Russia, Swedes and Morris have all been tried and all are good, but the latter is found superior to any other, from the trials which have been made of it in sundry edged tools. I am persuaded no cast steel, ever imported from Great Britain, excels it for the firmest and finest instruments. We regard this manufacture as one of incalculable value to the United States. All our edge tools, hammers, cutlery, &c. &c. depend upon good steel. We do not yet manufacture iron, as it ought to be manufactured, but we trust we soon shall. For the hundredth time we repeat—*upon COAL and IRON we must found the greatness of Pennsylvania.*

Pedestrianism.—The match against time, for which Capt. Parker, of Hothersall Hall, in this neighbourhood, has been a short time in training, was, on Tuesday se'night, decided near Buxton. Captain R. (as our readers will recollect) undertook for a considerable wager; to walk *seven* miles in *one* hour. The almost seeming impossibility that he would be able to accomplish so long a distance in so short a time, made the odds run high against him. Confident, however, in his capability to perform the task, he took the odds to a considerable amount, and on Tuesday se'night he commenced the match at the second mile-stone from Buxton, on the Manchester road, walking seven miles (which had previously been measured by an eminent surveyor) right a head, and completed the distance one minute 26 seconds within the time—the greatest feat on record.—The following is the time each mile was walked in by Capt. Parker:

1st mile in	7 minutes	52 seconds.
2d	7	54
3d	8	15
4th	8	32
5th	8	36
6th	8	45
7th	8	40
	—	—
	58	34

FROM THE PROVIDENCE JOURNAL.

JONATHAN'S VISIT TO THE COTTON FACTORIES.

Did you ever go down to Pawtucket?
  Good Lord! what a buzzing it makes!
Like fifty live crabs in a bucket!
  What a darn'd sight o' cotton it takes!

What a whirling and splashing! I never
  Did see such a racket afore!
An' then, that 'are up and down river,
  My stars! how the water does roar!

By George! what a nation o' spindles,
  An' millwheels all whirling around,
Some on 'em in garrets o' houses,
  An' some on 'em down under ground.

One fact'ry, I vow, 'tis a smasher!
  'Tis pretty near flat on the top,
You might put our house here right on it.
  An' Uncle Sam's saw-mill an' shop!

I walk'd round awhile, and went in it,
  Then, whew! what a terrible buzz!
I swagger! 'twas more than a minute!
  Before I could tell where I was!

Confound it. You never could hear there,
  A body might stand still and bawl!
I believe that you might stay a year there
  An' find something new after all!

I snore! why it does beat all nater!
  Such oceans o' pickers and reels!
My conscience! how can they contrive it!
  To tend all them spindles and wheels?

An' then, such great piles o' spun cotton!
  As big as a common sized mow!
By jings! if my eyes had'nt seen it,
  I would'nt believe it. I swow.

THE FARMER.

BALTIMORE, FRIDAY, JANUARY 30, 1824.

Very little business transacting at this season, and consequently we have no alterations to make in our quotations of last week.—We publish a statement of the latest prices of cotton in the Liverpool market:

LIVERPOOL, Dec. 2.

Cotton.—39,216 bags have been imported in November 1823, viz. from Charleston 3187—same month 1822, 3919; Savannah 930, do 749; other ports in America 10,913, do. 2691; New Orleans 1636, do. 1156.

Import the first eleven months, 1823, viz. from Charleston 93,351—in 1822, 76,992; Savannah 91,235, do. 76,194; other ports of America 103,536, do. 71,987; New Orleans 102,892, do. 56,626.

The total supply of Cotton to this port exceeds that of the first eleven months of 1822, by 87,588 bags; the increase from America is 109,215, and from the East Indies 5764, whilst there is a decrease from the Brazils and Portugal of 20,708, and from Demerara and the West Indies of 6683 bags.

December 6.

The total sales in the course of the week have been 8000 bags of which 6300 are American cottons. Our import amounts to 7800 bags of which 4700 are from the United States.

Our public sale at auction yesterday, was composed of about 1300 Orleans, 600 Sea Islands, 800 Uplands, 500 Alabamas, and 100 Bahamas. There was a good attendance of dealers and spinners, and every description of American cotton offered was sold.

The Upland, Orleans and Alabamas, at ¼d. to ¾d. lower than last week, especially middle and lower qualities.

The Sea Islands of common quality, and stained, went at a reduction of ¾d. to 1d. and good to fine 1½d. and in many brands considerably more from the former nominal rates; for the cottons have been so much neglected of late that we have scareely a guide to go by. The prices of these have been of late gradually lowering to those of common qualities, which it is generally understood arises from the great improvement in machinery, enabling spinners to make common cotton serve where good were formerly required.

Manchester Dec. 2.—"Referring to my lines of 24th November. I have only to say *you must not ship any Uplands but at the lowest prices of last season*, nor any good clean sound Sea Islands that shall exceed 11d. per lb. laid down in Liverpool."

CONTENTS OF THIS NUMBER.

CATTLE, Improved short horn breed, continued—NATURAL HISTORY, migration and torpidity of birds and animals—HORSES, on the appellatives, qualities, habits, and defects of—ROOT CULTURE for cattle, too expensive—MANUFACTURERS earning more than farmers of equal capital—PREMIUMS, what kind ought to be offered—PENNSYLVANIA AGRICULTURAL SOCIETY, list of officers and communications made to—DISEASES OF CATTLE, remarkable one described, and its propagation to the human species—HOGS—*scorching* off the hair preferable to scalding for bacon—MAN POWER, what it means, and how most advantageously exercised—SMITHFIELD MARKET, cattle and sheep sold in since the year 1789——WHEAT, average price of since 1789—MANGEL WURTZEL, how to cultivate and *store* it—EDITOR'S CORRESPONDENCE, on millet, a destroyer of fish in the gill nets—valuable native grape, corn and cotton crops—diseases of horses and cattle—Dr. Black's system of improvement—TOBACCO, reports of inspection—Lost hours—Pedestrianism—Iron converted to steel—Poetry, Prices Current, &c. &c.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore, where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

AN ADDRESS

TO THE HAMPSHIRE, FRANKLIN AND HAMPDEN AGRICULTURAL SOCIETY, NORTHAMPTON, MASS. OCT. 23, 1823, BY I. C. BATES, ESQ.

At a meeting of the Hampshire, Franklin and Hampden Agricultural Society held at Northampton, October 23, 1823.

On motion, resolved, That the President, and the Hon Joseph Strong be a committee to return the thanks of this Society to Isaac C. Bates, Esq. for his excellent discourse this day delivered, and to request of him a copy for the press.

Attest,
DANIEL STEBINS, *Secretary.*

Isaac C. Bates, Esq.

Sir—On behalf of the Hampshire, Franklin and Hampden Agricultural Society, we beg leave to present to you their thanks for your learned and excellent Address delivered before the Society on the 23d inst. and we are instructed respectfully to solicit the favour of a copy for publication.

We are, with respect and esteem,
Your friends and humble servants,
JOSEPH LYMAN,
JOSEPH STRONG.

Northampton, October 24, 1823.

Northampton, October 24, 1823.

Gentlemen,

The address, a copy of which you do me the honor to ask for publication, is submitted, without apology, to your disposal.

I am, very respectfully,
Your obedient servant,
I. C. BATES.

Hon. Joseph Lyman,
Hon. Joseph Strong.

☞ *The encouragement of household manufactures is a primary object of the Hampshire, Franklin and Hampden Agricultural Society. Hence the female competitors for premiums and ladies generally, attend the public exercises on the second day. Without the knowledge of this fact, some of the allusions in the address, and some of the topics of remark, would be deemed inapposite.*

ADDRESS.

Gentlemen,

We have again assembled under circumstances which are favorable to the views of our society. Since the last meeting, the Legislature have continued the annual grant for the encouragement of Agriculture and Manufactures, for the further term of five years. And it is worthy of remark, that in doing it, they have only executed the trust committed to them by the framers and founders of our constitution and government. It shall be the duty of the Legislature, say they, to encourage private societies and public institutions, rewards and immunities, for the promotion, among other things, of Agriculture and Manufactures.

It is too late, I apprehend, to arraign the policy or question the propriety of our agricultural associations. If there be any thing worthy of patronage, it is the art upon which all other arts depend; the occupation without which all other occupations are useless. The Dublin society, established in 1731, as it was the first in order of time, so it was for a series of years supported by the voluntary contributions of its members, until at length, its effects becoming apparent, other societies were formed; and now they are established throughout Great Britain, France and Germany, and indeed throughout Europe. All that is granted by this Commonwealth, and the several states combined, for the encouragement of agriculture, is absolutely nothing compared with what is done by France for a single national establishment, and that too in a land of vines and olives. Experience therefore, has settled this question; experience in different countries; under great diversity of forms. It is not too much to say, we have the judgment of mankind in our favour; not upon a subject remote from observation and difficult of research, but full in the public eye, opened by its effects and known by its fruits.—What then ought the conjectural scruple of the prospective calculator to avail, against this mass of practical evidence, which near a century has accumulated? If the only effect of our act of incorporation were to bring together once a year, the gentlemen whom I now have the honor to address; awakening their attention to what has been done and what is doing; leading them to an interchange of views and feelings; animating them to enterprise and emulation; I should think the society rested upon an unquestionable basis of utility.

Let it not be imagined, gentlemen, there is nothing more to be learned in the arts of life.—No obstacle to the march of mind, is more insurmountable than the conceit, that we are wise enough. It closes the eye of enquiry and shuts out the light of knowledge. True, according to the received chronology, this world is about six thousand years old. Yet it was more than four thousand years before you learned how to make a good plough. Cincinnatus talked with as much complacency as we do, of "the good old way," when he was fallowing his land with the limb of a tree for his plough beam and a knot to it for his colter and shear; and the patriarchs, when they were grinding corn with pestles. How long since you learned the art of printing—and a thousand other arts? How long since you found out the value of the potato?—Since you naturalized Dutch clover? Since you discovered that your plain lands were not made in vain? Depend upon it, gentlemen, there is a better way than that now in use, in every act of field husbandry, and in every operation of mechanics. Think you, that in this immense repository in which we live, you have explored the whole of its contents—or any part of them? The recent discoveries and improvements in the arts and sciences shew, that even now, in this age of late and fancied maturity, knowledge is in its pupilage. I would excite you, therefore, to a *thinking* cultivation of your lands; to attentive and nice observation. Push your inquiries to the extent of your capacity, and your experiments as far as a prudent economy will permit; and make no other use of "the good old way," which is often circuitous and often bad, than to keep along in it, until you can find a better. I hazard the conjecture, that there is now about each of your establishments at home, some defect, or misarrangement over which your eye has wandered a thousand times without discovering it. Extend the remark to your farms, fences, tillage and stock; you will find enough to fix your attention, and put in requisition all your powers, be they what they may.

Having thus spoken of our society and attempted to remove an obstacle to its success, I should be glad to present you with something worthy of it. The diversified subject of practical husbandry, you better understand than I do; and I have neither skill nor disposition to enter upon the details of stock. But the best fruits, which my industry has collected for the occasion, are at your service.

We find ourselves here, gentlemen, dependent upon four elements. What the industry of man cannot accomplish for him, the benignity of Providence has furnished ready fitted for use. The air, fire and water, essential as they are to our existence, are without price, and never, except in connexion with something else, become the subject of price. Of universal use, they are of universal enjoyment.

But the earth, from which we derive our subsistence, or by the agency of which we make the other elements subservient to the same purpose, is the subject of property; we call it ours and attach to it different degrees of value according to its quality, situation and condition. When lands were first taken up, they were of no value; and were they as abundant as the air, yielding sustenance as spontaneously, they would be of no value now; that is, not the subject of price. But for the support of the human family, they must be cultivated. The supplies they furnish, are, therefore, limited. And hence, although when our ancestors first established themselves upon this river, lands were of little value; yet as population increased and the lands first taken into cultivation became insufficient to satisfy the demand for their products, it became necessary to take into cultivation more land. Those under tillage then rose in value, and as each successive tract, under the influence of a growing population and an increasing demand, was taken into cultivation, the price of those already under improvement, continued to rise. Hence it was *demand* for the produce of land, that originally gave value to it, and that still regulates the price of it. A farm, that yields the interest of one thousand dollars, agency and expenses being paid, is worth a thousand dollars. If but the interest of half the sum, it is worth but half the money, and precisely for the same reason that bank stock, which yields six per cent. is worth its par value. Now, it is obvious that the interest which a farm will pay, taking for granted it is cultivated to the best advantage, depends upon the price obtained for its produce; and that the price depends upon the demand for it. *Demand*, therefore, for the produce, regulates the *price*, of land. We shall have occasion to make use of this principle hereafter.

We not only find ourselves thus located and dependent upon our own industry for subsistence; but we find ourselves distributed into classes; and it will be sufficient for my purpose to say, into Laborers, Farmers, Mechanics, Traders and Professional Men. And I must ask your attention for a moment, to the principles by which their income is governed, with a view to deduce the means by which their condition is to be improved.

The class of Laborers I intend, comprises those of *ordinary* skill, health and strength, who have a family to maintain. In relation to this class, it is an established law, that the rate of wages cannot rise much above what is requisite for their support, according to the custom of the place in which they live; nor fall much below it.

It cannot fall below, because, you perceive at once, the race would become extinct; or at least that population would be checked and discouraged, and the number of laborers reduced by death, or emigration, so as to bring the rate of wages up to the point assumed.

It cannot rise much above in any given place or country, because laborers from other places, or from abroad, would come in. The rate of wages would allure them. The supply thus becoming more abundant, the price would gradually fall to the point stated.

If there should not be sufficient competition to reduce the rate of wages, and it should continue to rise in spite of this obstacle, there is another, which has all along been resisting, that will effectually check it. It is to be found in the adverse interest of the employer. When wages become as high as he can afford to pay, they can rise no higher. This point is the extreme of their elevation. And thus the rate of wages ranges between these two extremes. And the extremes themselves are not unfrequently nearly in contact. They approach and recede as business is productive. Probably at this moment, no farmer can afford to pay more than the minimum rate of wages. Indeed, from the mere effect of competition, it seldom rises higher.

It is mainly upon this principle you account for the difference between the ordinary wages of a man and a woman.

You perceive I limit the application of my remarks to laborers with *families*, because they are the nurseries of population, and must therefore be sustained; to those of *ordinary* skill, health and strength, because they constitute the mass of laberers. It is obvious, therefore, that to improve his condition, such a laborer must reduce his expenses below the ordinary standard or improve his skill and ability so as to command more than ordinary wages.

And hence it is further obvious, that laborers without families, and laborers with, who have more than ordinary skill, or from any cause, are more than ordinarily useful, may accumulate property; and it not unfrequently happens that they emerge from the condition of their early life and become men of great wealth and respectability.

In addition to the income of the laborer, the Farmer has an income from his farm and stock, which constitute his capital, equivalent to the current rate of interest upon the *cash value* of it for the *time being*. Should land produce more or even this rate of interest, taxes, agencies and repairs deducted, capital would be invested in it, and land, in consequence of the demand for it, would rise in value, until the rate of interest should be reduced as much below the current interest, as the security of real estate rises above personal security. And although the capitalist, who might not be able to superintend his lands, could not make the investment so advantageously as the husbandman, yet there is a wide field for competition among farmers themselves; and, if lands will produce more than the current interest, they either have, or can readily command capital to buy them. So that the income of the farmer is very little, if any thing more, than the income of the laborer, added to the interest of his capital, and seldom falls below it; for the number and business of farmers would decrease until the demand for their produce should raise the profit of their business to the common standard.

The income of the Mechanic is that of the laborer, and as much more, in the whole, as his time and expenses in acquiring his trade and the tools with which he prosecutes it, are worth.—It will neither permanently exceed, nor fall short of this, for the reasons already assigned.

At present the wages of a mechanic exceed this ratio. Take seventy-five cents, as the average of a laborer's days work, and one dollar and twenty five cents, that of a mechanic, it gives to the mechanic a fraction more than the interest of twenty-six hundred dollars, above what the laborer receives. Nor do I know whether there is much difference between the certainty and regularity of their employment.—It is plain that the knowledge of his trade and the tools of his occupation, cannot cost this sum. But it is to be remembered, that he is entitled to more than the interest of his disbursements, for this species of capital will be extinguished by his death. Yet this allowance being made, the income of the mechanic is still disproportionate to that of the laborer; but, in the number of apprentices, there is a cause in operation, that will equalize their profit.

The Trader is subject to the control of the same general principles. He, like the mechanic, must make a profit that shall pay him for his apprenticeship and the incident expenses; for his time and services in superintending and prosecuting his business; for the interest of his capital, and as much more as will cover the ordinary risk of losses. If he cannot do this, no wise man will embark in trade; and if he can do more, enough will, to reduce his profit.

The same general law regulates the professions. A Lawyer, for instance, must derive an income from his profession, that shall refund to him the expenses of his education; of his library; that shall pay him for his services, and enable him to live as custom and general propriety require. And his income must rise and will rise in proportion to the perplexity, or any other undesirable circumstance attending the business of his particular pursuit. Otherwise, no man, who valued his own comfort, or consulted his own interest, would engage in it.

Permit me, as connected with the subject under consideration, to suggest one among many reasons, why the salaries of clergymen are comparatively so low. It is the *certainty* of support. Should the time ever arrive, therefore, when the basis of this contract is to be changed, and the security of a support for *life* lessened, salaries will and must rise to cover the risk.

Thus it is manifest, that the subject of income, which seems to be arbitrary and to operate capriciously and unequally, is governed by established principles; that the income of a man of *ordinary* talent, health and strength, let him belong to which of the classes in society he may, is limited, by a law of general efficacy, to the standards I have named; and that competition is the repressing, and the sustentation of life the reacting, power.

You perceive that the further a business is removed from competition, the greater will be the chance of profit. This might be illustrated in a variety of interesting particulars. The mechanic is further removed than the laborer. Most men can work, but few comparatively can make a watch. The trader is still further removed. He must not only have skill, but capital. Professional men, still further. Nothing short of a life of a laborious application, aided by good natural talents, can insure them success. Hence it is, that here and there an individual, possessing great powers and rare attainments, outstrips all competition, moves in his own sphere, and prescribes his own laws. Suppose every man could write the Waverly novels? The copy-right would not be worth more than that of Tom Thumb. So in all the mechanic arts, he who is skilful beyond others, dictates his own terms and profits by his own genius. This principle runs through all the orders and grades in life, from the youngest domestic of our families, to him who directs the industry of a farm, shop, or nation.

The conclusion then is, which I wish to impress distinctly upon your minds, that without extraordinary *talent*, extraordinary *industry*, or extraordinary *economy*, no man, with a family, can reasonably expect any thing more than a bare living. Those whose estates are already sufficient to meet the demands of old age, or premature infirmity, are of course excepted. If you have favoured me with your attention, you will have perceived that this is but a corollary from the principles established.

Now, a competency—neither poverty nor riches—is essential to our happiness; so essential, that he who is married without the possession or prospect of it is a mad-man; and waving all courtesy, the girl that would marry him is a fool; and that as well whether he be in the possession of it with habits likely to dissipate it, as when he is without either the possession or prospect of it. There is no weighing, nor measuring, nor counting the calamities incident to a destitute and embarrassed condition. They press upon the breast of a man like an incubus; they obstruct the pulsation of his heart; they deaden the current of his life; they wither all the beauties, with which nature would cheer him by day and fancy beguile him by night; they are the ever present messenger of fresh and evil tidings. And nothing but the reduction of a father to something less than human, or the elevation of him to something more, can render such a state supportable. It is, therefore, one of the highest duties and ought to be incalculated from the cradle up, as well upon those who are born to a competency, to maintain, as upon those who are not, to acquire it; for it is favourable to the growth of all the virtues and essential to domestic comfort. It is the little vase of earth in which your flowers and shrubs, that are to ornament and embalm your fire sides and sweeten and cheer the intercourse and sympathies of husband, wife and children, are to grow and flourish. Is it not then worth a little self-denial, the doffing of an extra ribbon, and another and another effort to accomplish it? Tell me, ye who can recollect enough of the trifles you have thrown away as of nameles importance and for which you were not a whit the better, to wrap your children warm in flannel, to light up a cheerful fire in your own neat and comfortable dwellings, to spread your table with abundance of wholesome food, and to cheer you, if sick, with the prospect that these blessings will continue and brighten upon you, without the aid, or at least without the reproof, of charity,—tell me, is it not worth an effort?

You recollect, that without extraordinary *talent*, *industry*, or *economy* we have nothing more to expect than a living. While, therefore, I have only time to urge you to IMPROVEMENT, without dwelling upon the means; and to redouble your DILIGENCE, without noticing wherein we are remiss; I will detain you for a moment, if you please, upon the subject of ECONOMY—economy within your houses; economy in building them; and economy in one other particular.

Economy is to industry, what the memory is to the mind—it retains for use. The great secret of making estates, lies in this. You have only to apply your arithmetic to the operation of compound interest, during a moderately long life, to be satisfied of this fact. A dollar expended at twenty-one, does not accurately denote the extent of your loss. You not only lose the dollar, but you lose many more, which without subjecting you to any trouble, it would have earned you. You grub up the measure of wheat which is well sown, and in a good soil, and which would yield you, not merely one, but an annual, and a perpetually increasing crop. Extend the application of this remark to your expenses for dress, furniture and equipage, and indeed to your business and methods of conducting it, you will find various particulars in which savings may be made, trifling in themselves I admit, but in their results, wealth. Throw in a few ten dollar hats, ye who have your estates to make and who would vault the stars without wing or trumpet; throw in a few pair of five dollar boots; a few watches—a most abundant article!—to say nothing of their appendages, or indications, which have involved in such uncertainty, the business of metallic research—throw in a few other superfluous commodities, if the gallery will permit, and if not, throw them in. You will have a collection directly, which, without any other magic than that of a little patience, will make you an estate.

However, it is more to my purpose to suggest, that negligence, in the department of a house-wife, will either make, or keep, her husband poor. No providence nor exertions of a man can sustain his family and improve their condition, against this silent and ceaseless corrosion at the heart. It is the perpetual dropping, that will wear the marble and exhaust a sea. If a man, therefore, has a slatternly wife, it is all over with him. The weird sisters may wind up his destiny as soon as they please.

Entering upon life, a young man, with some thing before hand, builds a large house. It is then to be furnished. By this time, all he is worth and his wife too and perhaps something more, is invested in it. Fences and out-buildings must correspond. Repairs must be made as occasion may require. Taxes must be paid. Furniture replenished as fashion varies. And, with such a fine establishment, there would be no resisting the temptation to shew it frequently to one's friends. Now I affirm, that at the age of fifty, if instead of building, he had hired, or limited his accommodations strictly to his wants, the capital he would have saved and the profit upon that capital, would have amounted to a handsome estate. But suppose he has been able to maintain and educate his family. When he makes his will, he gives his homestead to his favorite son, and, to make his children equal, charges him with the payment of legacies to the others. Thus the son begins life, with an accumulation of debt upon him, and, in the issue, sinks under it. Go where you will, the eye meets with a succession of large houses, in every stage of dilapidation from broken windows, to falling sheds, and prostrate walls. And, what is singularly characteristic, we build for the summer; so that in order to keep cool, one third of the year, we have full employment, the other two thirds, to keep warm. A different practice would have put a new face upon New England. But who would live in a little hutch of a place! is the general objection, and away goes all a man's philosophy on the subject.

The other particular, upon which I promised a remark, although too important to be passed in silence, yet, as it has been the subject of comment by my predecessors, I shall be excused if I only notice; for, if the certain consequence of ruin to health, to character, to fortune, to family, and, if you choose to look beyond, the career of ruin onward; if to a man who admits the truth of these realities, and feels them too, and with a sensibility that maddens to mental torture, and deepens to anticipated hell, these living images appeal in vain, what think you words can do! Oh, there is not in nature, an object more to be commiserated, than an intemperate man, thus bound down and chained to his destiny by this tyrant habit. He is in the condition of Laocoon, in the folds of two enormous serpents; and what heightens the horror of the conception and finishes the analogy, the same complicated wreathes of the strong and poisonous and resistless monsters that wring the father to death—embrace his children also. Is it not an object worthy of this society, of the combined effort of this society, to see if something cannot be done to stay the progress of this appalling evil? If you cannot extinguish the fire, may you not countermine and counteract it, so that when the materials upon which it feeds are consumed, it shall go out? But, at present, it is bursting every barrier and kindling along the whole line of life.

Upon this subject of economy, a wide field is open for remark. The facility with which money was made, during the war in Europe, has entailed upon the country generally, habits both of thinking and acting, that leave it still questionable, whether, in the end, we shall gain, or lose by it. And the rage of speculation in lands, seems to have connected itself, in its influence, like an evil star, with the generation then coming into being. But feel, think and act as we may, the time has come when the airy castles of other days must crumble, and estates must be made, if at all, by long continued, well directed industry, and universal, rigid economy. I however dismiss the topic, for it is in vain to expect a general improvement, against the influence of your poor laws. They are a direct bounty upon indolence and extravagance. If provision were to be made, for the very purpose of encouraging these positive evils, I know not how it could be done more effectually than it has been done. You take from men the motive to exertion, when you provide for their support without it. If either the indolent, or the extravagant, had to depend upon their own exertions for subsistence, and not upon their more industrious and prudent fellow citizens; if there was neither bed nor board spread for them by public law; they would have at least enough of the instinct of animals about them to make some provision for themselves. Those, who are in want from misfortune, or infirmity, have an interest in the sympathies of the heart of every man, upon which they can draw, at pleasure, to the extent of their need, and confer a favor, while they receive an obligation. But at present, they are like debtors in the company of felons.

I have said, that the income of the common laborer does not ordinarily exceed the expenses of his family; nor that of the farmer the interest upon the *current cash value* of his capital, added to the income of the laborer. But when demand for labor is abundant and the supply limited, wages will rise to the highest price the employer can afford to pay. And when the demand for the produce of land is steady and increasing, lands will rise in value and to an indefinite extent. These points have been established. The same remark will apply generally; for improvement, in any one branch of productive industry, affects beneficially the whole community.

The question then is, and a question worthy of your consideration, addressing itself to a vital interest of New England, how are we *to increase the value of our lands?* or, which is the same thing in other words, how are we *to improve our market?*

You have looked at home and abroad for a succession of years. Your merchants have explored every sea and port; and you have no reason to expect an improvement in your external commerce, for it rests upon the basis of general reciprocity. We know not what new channels of commerce may be opened, nor what mines of wealth explored. These are among the contingencies of the future, upon which no calculation can be made, nor reliance placed. The important, practical inquiry, therefore, returns upon us; can any thing be done to improve our market?

If we all become farmers, the effect will be, an *increase* of supply, and a *diminution* of demand.

I know of but one answer to the inquiry, and of but one expedient that promises to be effective.—We must manufacture, so far as we are able, the products that come to us, in millions sterling, from other countries. I am aware that the public journals, with but few exceptions; the periodical works of the day; and the notes of American editors and publishers, appended to every work upon political economy that passes through their hands; to say nothing of the prejudices and feelings of the people on the subject; all maintain, that this is not for the interest of the farmer. Their position is, *that he ought to buy his coat, where he can get it cheapest.* The position contains a truth; but in its *application*, it is false, and in this lies a deception which has not been without its effect.

I admit, that as between two American manufacturers, other things being equal, you ought to buy of him who sells the cheapest. This is the *truth.* But, as between an American, and a foreign manufacturer, you ought not to buy of the foreigner, even if he sell the cheapest. This is the *falsehood;* and this position I am to sustain.

Let us suppose that we were to manufacture the article of broadcloth, to the extent of our wants.—Capital and industry must, of course, embark in the new business. That capital must have the means by which to operate—mill seats, buildings, machinery, raw materials, laborers. That industry must have the means of subsistence. The *effect* then will be, to create an additional demand for the capital and industry that remain, and, consequently and necessarily, to give a larger profit. As the produce of land rises, land itself will rise, and every thing, upon which the increased demand bears, will rise. Although the farmer now makes, for illustration say, double the money he did before, twelve per cent. instead of six, yet the capital and industry thus embarked, cannot return to be invested in lands, because lands are worth double the money they were before. The capital, therefore, will continue, and the profit of the new business will be gradually reduced by corrivalry to the common standard, or, as commonly happens at first, to something below it; but at that point it settles. This is the *way*, in which the new capital and industry will affect you. Look for a moment to the *extent.*

An hundred thousand laborers, converted into soldiers, not only create a demand to the extent of their own wants, but of two or three hundred thousand more, whom their labor supplied. The manufacture of broadcloth merely, would give new employment to a multitude of men, women and children. It would call into being a variety of new crops, such as woad, rape-seed, teasles, &c. It would introduce into your pastures another variety of stock—the fine wool sheep; and when you recollect that about two million pounds of wool, costing little less than two million dollars, were imported during the last year, you will form some conception of the value of this article. It would create engineers and machinists, and furnish extensively new employment to smiths, joiners, carpenters, and mechanics of all kinds.

But instead of broadcloth merely, suppose we were to manufacture the endless variety of products, for which we are now dependent upon the workshops of Europe. Would it not give a new impulse to industry! Would it not create a new demand for produce! And it would be contradicting a law of nature to say, that lands would not rise in consequence.

We are, however, not left to speculation upon this subject. We have the demonstration of experience, as well as the conclusions of reason. Go to Waltham, to Providence, to Munson, to Southwick—go into the vicinity of any manufacturing establishment,—Col. Shepherd's of this town, for example—a prominent case to illustrate and establish, not only the truth of the position assumed, but to shew what individual enterprise, skill and perseverance, are able to accomplish,—and open your eyes, and the proof will enter.

If we continue to buy the manufactures of other countries, we must continue to sell at present, or more reduced, prices. But, if we manufacture ourselves and pay more for what we consume, we shall be indemnified in the advance of produce, rise of land, and general improvement of the market. Ask a gentleman from Springfield, whether he had better pay ten dollars for his musket, with the resulting benefit of the armory, taking into the account, not only its influence upon his shop, but upon his produce and lands,—or eight, for one from the tower of London, without it? And yet the position would be as tenable in relation to him as it is in relation to the farmer. It would be as much for his interest to buy his gun, where he can get it cheapest, as for the farmer, to buy his coat.

I have presented you with but one view of this subject; but in relation to the farming interest, it is in my apprehension decisive. How then is the object to be accomplished?

Manufacturers, at present, having large capital and able to hold their goods, continue their business. But there are no new establishments, unless it may be in the manufacture of cotton. There can be none. Capital will not be embarked, unless sales are regular. There can be no regularity, nor certainty of sale, while the market is left to fluctuate under the unequal importation of British goods, which are more or less, according to many causes alike beyond our apprehension, or control. Who could have anticipated, that, in imitation of the satinett into which our coarse wool is wrought, such quantities of goods would have been thrown into market and sold at less than sterling cost, as nearly to annihilate, at least for a time, this valuable branch of our domestic industry and reduce the growth of the raw material to a losing business? You might as well expect a man, not a Knight of Malta, but a sergeant of the guard here, to list himself for conflict with one or twenty, as might *happen*, he unarmed and they in steel, as that an individual, or company of individuals, should attempt, under existing circumstances, to rival Great Britain in the business of manufacturing. Sales are fair and prompt to-day; to morrow, a ware-house of London is emptied in the streets of Boston. The manufacturer will hold his goods, if he can; if not, he must sacrifice them; and in either event, sustain loss.

Let the government, therefore, give birth and protection to manufactures, by increasing the duties on importations, cautiously and prudently, but to the needful extent. Practice will soon perfect skill; competition, reduce prices; and the advance of the consumer return to him, in another form, with rich commissions.

But the commercial theory is, "let manufactures alone,—if profitable, they need no protection; if otherwise, they do not deserve it."

I have already replied to this assumption. I have no disposition to retort it. The mine is rich. It is ours. If we permit other nations to work it, it is our own folly, or something worse.

But I answer further. It is admitted, and by those who resist an increase of duties, that the existing factories are profitable to the country. Yet, but for the *exclusion* of British goods, by the declaration of war, there would not have been a spindle in operation to this day.

I answer further. The arguments against an increase of duties, go, with a concentration of all their force, to shew, that there should be no duties at all.

I answer still further, and my appeal is to this society. You patronise household manufactures and encourage them by your rewards. You do right. But upon what principle is it, that the labor of a girl, that turns a single spindle, can be productive, and the labor of another, that turns one hundred, the reverse? There is the expense of the machinery! True, and there is the saving of the wages and board of ninety-nine persons. And not only so; while the labor of one hundred persons is thus despatched by one, the ninety-nine are all at liberty, and each of them can do as much work, in the same way, as the individual spinster. If the one deserves patronage, therefore, I leave it for you to determine, whether the other is not entitled to protection? But the master of a family, if he cannot sell, can consume; the manufacturer, however, must sell, or his business must cease. And, therefore, a wise government will enable him to do it—not for his own sake merely, but for the good of the great fraternity; or, if you please, of the family.

The balance of trade, as it respects England, is against us; but the conclusion, that therefore it is a losing trade, is denied. Without stopping to trace the arguments in their windings, or contending that the custom-house returns indicate the exact truth on this subject, or controverting the position, that it does not follow, *of course*, that it is a losing trade; yet it is quite apparent that an individual may purchase and consume more than he can pay for. A nation may do the same. And an individual does it, when the amount of his purchases and consumption, for a given time, exceeds the spare product of his industry and capital, supposed to constitute his means, for the same time. A nation does it, under like circumstances. When an individval mortgages his estate, or parts with vested and productive property, to the trader, his condition is obvious. What means then, permit me to inquire, the almost unlimited transmission of stock, both bank and national, to England? When the day of reckoning and payment comes, let the guardians of the public credit look to it, that its pillars do not tremble.

It is not two hundred years since Great Britain imported her broadcloths from Belgium, and not one hundred since she derived her cotton goods from Germany. Had she acted upon the principles which we oppose, she would not have sold a yard of either, even in her own market, to this time, while now she supplies half the world with both. But, instead of leaving manufactures to originate and protect themselves, she originated them, by prohibitory and protecting duties. In the time of Elizabeth, we find the great Bacon, vehement, in protesting against the importation of foreign products, on account of the national dependence and poverty which it involved. To this day the ports of Great Britain are closed against the introduction of a single manufactured article, which British industry and British capital can make. No sooner did our straw-braid find its way into London, than a petition went to Parliament for an act of exclusion.

Suppose the tables reversed and that we could undersell Great Britain, in her own market.—Would she permit it? She would sacrifice her manufacturing capital, it will be said. I say more. She would not only sacrifice that, but her agricultural capital with it.

It may be for the interest of the merchant, that importation should be free, and consumption to the extent of our ability to pay. The more he sells, the greater his profit. But it is not for the interest of the farmer, nor of the country. It will pave your commercial cities with gold, but it will fill your towns with beggars. I say this, "not that I love Cæsar less, but that I love Rome more." The agricultural interest, in connexion with *commerce merely*, never did become rich, and never will, and never can. Its capital is too limited; its products too bulky; its market too remote. What makes an acre of cabbages in the vicinity of Boston, worth ten acres of corn in the country? Or an acre of land, *for mere tillage*, worth an hundred dollars there, that would not be worth ten here? The demand must be brought home to you. The country must be filled with activity and industry, not of the plough and spade merely; but of the spindle and loom; the forge and hammer, and all the busy machinery of the manufacturing process. It is this, and this only, that can make you rich.—The principles, that govern your income, shew that it cannot be otherwise. And your innumerable mill-seats and the abundance of your water power, are an indication of nature, and a pledge too, that you may become rich in this way.

BUT THE PRICE OF LABOR!—Sell your wheat for two shillings and six pence by the bushel, and you may hire labor for a shilling. Nominal values are of no importance. *Relative* value is the only thing material.

BUT THE REVENUE—THE SUPPORT OF GOVERNMENT!—I am aware that when you buy a coat, you pay a tax. One part of the price goes for the support of government; the other to pay for the cloth. But I answer—pay directly, what you now pay indirectly, and what you pay, with a triple profit, as well upon that part of the cost of your coat which is tax, as that which is cloth; one to the importer, one to the retailer, and a third to the intermediate merchant.

The government that appeals to the understanding and consults the interests of the people, will never lack resources while any remain.

I would venture to inquire then, whether, since British ships have contrived to find employment, and British merchants to make fortunes, and British subjects to accumulate a fund in the hands of government, to the unexampled amount of their national debt, notwithstanding an absolute *exclusion* of foreign manufactures, our commercial and mercantile interests—distinguished as our merchants are for enterprise—may not, possibly, *survive* a more limited importation of them?

Increase of population and consequent demand for produce, originally gave, and still give, value to land. How injurious, therefore, to New England has been the emigration to the westward! The magic that has reared the towns and villages in that part of the country, has been your citizens and your capital, under the double influence of increased exertion and increased economy, the prevalent virtues of a new settlement. I know that, politically, some advantages may accrue from a New England population there, and I by no means wish ill to those of our friends who are interested in the lands there, but, to the same extent as emigration prevails, the value of property is reduced here, to say nothing of the loss of capital and of men—the most valuable of all capital. It is this, among other causes, that has left farms upon the hills without tenants, without purchasers, and without price. Bleeding at every vein, for a succession of years, will reduce any subject to depletion. The way to restore health and soundness, in such a case, is to cut the ligatures and stanch the blood.

The bounties of Providence are distributed with more impartiality than we imagine. Wherever a privilege is given, or hardship imposed, an equivalent is exacted, or conferred. Our hills are rough; but the business of grazing affords leisure to farmers, for the very purpose of enabling them to subdue the rebellious character of the soil. Our river lands are productive; but the price of them is comparatively high, and, without yielding the proprietor a better return than the hills for the interest of his money, they exact of him more labor. With industry and economy, the necessity of which is a blessing, we can all live, and in the Arcadia of the western world, they are not exempt from the common lot. At certain points of remove, deformities disappear in the indistinctness, or blend in the light, of the landscape. For more reasons than I have time to assign New England is the place in which to live and to die.

The classification of men in society is not arbitrary, but grows out of the nature of things.—You may as well, therefore, attempt to change the immutable principles upon which society is founded, as to change the organization of it in this particular. You cannot do the one, without the other. Each department of industry, whether intellectual or corporeal, is filled, because there is something in it *to be done*, by which subsistence, or distinction, or both may be gained. This diversity of occupation forms classes, all governed by the same motive, and posting, with what ability they have, to the same results.—Were you to take the fabric of the social state to pieces, therefore, it would make itself up again in the same general form. As in every character so in very class, there are blemishes and defects; but much of the unhappiness of men results from magnifying the one and the other.—And it will usually be found, that he who is most in fault, is most censorious; and that the same spirit, which kindles at the renown or elevation of another, would plant itself upon the crown of the arch of both, either by mounting to its height, or by levelling it to its capacity. There are lawyers who are the ornaments of their profession; others who are the disgrace of it. There are men of power and authority, who are the benefactors of their country; others who are its scourge. There are men of fortune, whose riches give means to charity and influence to virtue, that are the golden spires that glitter upon the capitol of society—objects upon which the sun loves to shine and from which to reflect his own beams of munificent glory. There are others, on whom Providence seems to have smiled and around whom to have scattered a profusion of temporal blessedness and all the radiance of temporal honors, who are nevertheless an iron bound coast, from which a fellow creature, however he may have been shipwrecked in the storms of life, however much an object of pity and compassion and charity, had better keep off and trust himself to the mercy of the elements—a coast upon which there is no life boat, and along which the passing mariner, whatever tempests may beat upon him and with whatever blackness of darkness cover him, never ventures the signal of distress a second time I might run through all the classes in the circle of society and apply the same general remarks to individuals of each. You meet with farmers and mechanics who are conspicuously worthy, who adorn the station they occupy and would have adorned any other. You meet with others, the circle of whose being is narrowed to self alone, and whose imagination, in its most playful and discursive flights, never ventures beyond it.

But as we are all embarked in the same vessel, the conclusion is, we have storms enough to encounter and calamities to endure in this voyage of life, without mingling bitterness in each others cups, or infusing poison into each others comforts. We mar the incomparable beauty of our inheritance, by petty disputes and rivalries among ourselves. Run over the map of the world; you cannot select a spot more privileged than that which you occupy. We wish the patriots of South America, of Spain, of Greece, success; because we look forward to the time, when they may enjoy what you now possess without limitation and may possess without end. But, after they shall have gone through the struggle of right against wrong, of the people against power, they will hardly have improved their condition, until, by education and moral culture, they shall have formed the mass of population into a race of men, capable of understanding their rights, as well as able to assert them. True, the convulsions of the revolution break up the old foundations of despotism; lay open the unexplored recesses and dormitories and cells of superstition; and send the light and air of truth and liberty through the dark domain of many centuries of mysterious and terrific power; and prepare the way, by thus rolling their scourge fiercely over the earth, for another and a better state of things; yet the time is far distant, when your sun will shine in their firmament; when the dews of your parochial, religious and civil institutions, will descend upon their mountains, and awaken, into life, the countless blessings and beauties of your free and happy land. Here you have perfect security for life, liberty and property. Here, you have equal rights and equal honors. He who will, may run the race and take the garland, or scale the heights and deck himself with the plumes of glory. I would inspire you, therefore, with the deepest emotions of filial and grateful affection for your pilgrim fathers;—these are the fruits of their toil; this is the land of their sepulture; here all your hopes are anchored;—and I would elevate you in adoration to Him who has manifested Himself more distinctively, theirs and yours, than to any other people on the earth.—O! it is a subject upon which I would dwell, and grow immortal as the theme. But I am admonished that I have passed the limits of the hour assigned me. There is a time,—when friends must part.

ADVICE TO YOUNG FARMERS.

ON THE APPELATIVES, QUALITIES, HABITS AND DEFECTS OF HORSES.

(Continued from No. 45, page 356, Vol. 5.)

Windgalls, improperly so called, are encysted tumours, or bags filled with a gelatinous fluid or jelly, which being pressed from the tendous by over-weight or exertion, stagnates between the joints, and forms for it self those cysts or bags.—Their situation upon the pastern joints is well known. Some horses are very little subject to them, even if hard-worked; others will have them before they have done any work at all. If not too large, and they feel elastic and disappear on rest, they do not render the horse unsound; but if large, and soft to the touch, they become exceedingly painful, and the horse soon grows lame. The only radical cure is excision, which I have experienced, and shall describe in its place.

The *ring bone* is a hard, or bony excrescence, upon the coronet, which sometimes almost surrounds the top of the hoof, occasioned perhaps, by the iron lock, which has fastened a clog or fetter; it also may proceed from no visible cause, and is then supposed to be hereditary.—However, I have never yet known it effectually cured; the horses supposed to be cured, never standing sound in work.

A *quittor* or *horny quittor*, or whitlow, is also situated on the coronet, or between hair and hoof. Those which I have seen, were immediately above the inside quarter; when deeply seated, they are no otherwise curable, than with the loss of part of the hoof, whence a seam or apparent partition, up above the heel, called a *false quarter*. In this latter case, the soundness of the horse can scarcely ever be depended on and he is liable to drop down suddenly on his way, as I have more than once experienced to my cost.

The *sand-crack* is a small cleft on the external surface of the hoof. No horse ought to work a single day with one, because if neglected, or aggravated by work, the crack may enlarge, and end in a quittor, and false quarter.

Of the *founder* in feet, chest or body, the symptoms are so well known, as to need no description. Progression seems universally impeded. The horse bears upon his heels, and inclines backward. Few recover, even if the disease be sudden and acute.

Running-thrushes are a fœtid discharge from the frog, the aperture of which, in consequence, appears moist, the horn perhaps decayed. It indicates a strong, full habit, and hard feeding, and has been well compared by Bartlet, to the copious excretion of sweat from human feet, which it would be dangerous to repel. To talk of *curing* running thrushes, is merely to amuse. Horses much liable to them, will always have tender heels, and should be ridden with bar-shoes.

Corns, upon horses, bear no analogy with those upon the human feet; indeed the term is a misnomer. There are still callous, horny excrescences about horses feet, similar enough, in all respects, to human corns, but they are not so distinguished. We are to suppose the feet of Cæsar's horse had proper corns. The ailment, in question, is called by the French *bleime*, and is, properly, a bruised spot or speck upon the sole of the heel, wearing either a red and bloodshot, or black appearance, according as it is recent or otherwise, as we observe of the same accident in the human nail. Its most common origin is from bad shoeing, and is curable by the contrary. I have cured, perfectly, very bad corns of two years standing, which never afterwards appeared, in the course of years, the hack dying in my possession.

The *feet*, in general, may be divided into the extremes of hard and soft, both of which are too frequently met with. I have had two hacks with feet of each kind; one of which I rode constantly nine, the other, occasionally, three or four years. For too hard feet I know of no remedy, except their constantly running abroad, and then a fortnight's work upon the road, will render them so feverish and painful, that your horse will be crippled; in short, will have the appearance of an incipient founder. Over-strong and hard hoofs are said to occasion lameness, by compressing the internal structure of the foot. Their appearance is usually high and deep, sometimes like ass-hoofs, very hollow, with scarcely any frog; sometimes much contracted atop by the coronary rings; at others, deep, thick, and clubbed, and the horse, though sound, goes in a fumbling way. I have, now and then, seen Welch horses with this last description of feet, which soon become lame in the stable. Soft feet, and low tender heels, may do great service throughout, with bar shoes, and constant attention. Bred hacks are apt to have the feet too small; and often you will find horses, with feet of the right black flint colour, and to all appearance unexceptionable, and yet they will stand no service on the road.

Aliquando bonus dormitat Homerus, and I think Dr. Bracken's wits must have been at any rate sleepy, when he corrected Sir William Hope, for the assertion, that tender footed horses bear heavy upon the hand; a fact, of which I have had long and troublesome conviction.—We do not often catch the good Doctor napping; but I can mention another instance. To oblige his friend, Sir William Parsons, as it should seem, Bracken disgraced his excellent work, by inserting a cruel and ridiculous pretended remedy for cutting behind; which was, to fasten a knotted whipcord between the horse's thighs; as if the infliction of tortures could possibly change mal-conformation, or strengthen weakness. How like to the cruel sophistries of ignorant and cold hearted political quacks, who punish misfortune *in terrorem*.

Heavy shouldered horses, and high, hammering goers, beat and founder their feet. The ill consequences of being *forelow*, in a saddle horse, are sufficiently obvious; but to a pack horse, it is an advantage. The old prejudice, in favour of short *backs*. round barrels, and carcases ribbed home up to the huggen bones, seems to have given way to the reasonings of Bracken; and the idea of an equal and proper distribution of length, is in general adopted by our sporting people. Indeed, to view the back of a horse, merely as a bearing fixed upon upright columns, the intent of which is solely to stand under a given weight, a short bearing would have the preference; but as the back of a horse is destined to move, as well as sustain weight, it must be considered how far a defect of its longitude, and an irregularity in the general disposition of length, retards action. Our Jockies say, "A racer," they might have said a goer, "must have length somewhere." That is perfectly just; but in consequence, it always happens. that a horse which wants length in his back, will be sure to have it in some improper place, the legs for instance Short-backed stallions are very apt to get leggy, spider-shaped stock. A horse which stands over a great deal of ground, may be a goer, merely by virtue of his general length, if his shoulder be not too unfavourably made.

The spine, being too short, is not sufficiently pliable, and the want of room between the ribs, and hip bones, occasions the entrails to be so pressed towards the lungs in action, as in a considerable degree to impede inspiration. Length of back will always be found advantageous, when there is sufficient general substance, and particularly, width and swell of the muscles in the loins and fillets; but short backs are infinitely to be preferred to long thin shapes, with hollow flanks, and narrow weak lines.

Hollow backs are apparently weak, and the curvature of the spine must in degree hinder action, as well as all other irregularities of form. Horses of this form have sometimes a very elevated crest, look handsomely mounted, give an easy, convenient seat, and are pleasant goers.—High, or *bream-backed* horses, throw the saddle forward, and are liable to be galled by it, and are often hard stumping goers. But a horse, unless a capital one be the object, must never be rejected, merely on account of being either hollow, or swine-backed.

I am uncertain, whether a mare, so much hurt in her loins, as to be called *broken-backed*, would breed; but thoroughly convinced, that every horse of that description should be knocked on the head. They are sometimes styled *Megrim Horses*. They will feed, and even get fat. The defect is discovered by trotting them briskly about two hundred yards, when they will infallibly sink down upon their buttocks; this they will do upon being put to any labour; it is totally incurable. I have seen but two of this kind, one of which I was unlucky enough to purchase; and, to amend the matter, he handled his fore-feet with all the dexterity of a pugilist; a vice, no doubt, acquired from the abuse the poor animal had suffered, in consequence of his deplorable misfortune.

A sinking is sometimes observed at the extremity of the back, as if it were parted from the rump by a cross-line, instead of the fillets being oval and elevated; it detracts from strength—The hip-bones being sharp and not handsomely turned, the horse is said to be *ragged-hipped*; a defect, in point of beauty, according to the rule laid down in Hogarth's Analysis.

The large *carcused* horse is generally robust and durable, eats much, requires much water, and digests well. One with a light greyhound belly is speedy, most probably hot; if loose, and weak-loined, he is seldom worth his keep.—These are such as give their jockies the slip, by running through the girths. But a light carcased horse, deep in the girth, and well filletted may be among the most excellent, both for speed and duration. Such are often found to be good and sufficient feeders, and of rare temperament.

The *goose-rump* is, as well as the ragged hip, another angular infringement of Hogarth's curve of beauty. If the rump be too high, the hinder will press too much upon the fore-quarters in action. When the quarters droop, they are, in course, too short, and the tail is set on too low. Round, full buttocks shew the common or cart-breed.

To be *hipped* or *hipshot*, is to have one hip lower than the other, and the flesh wasted on that side. It may arise from a blow or strain.

A horse lame in the *whirl-bone*, or hipjoint, drags his hind leg after him, and drops backward when he trots. This lameness, and that of the stifle, if taken in time, and the subject be young, are always curable.

The bay gelding, which I sold to the late Mr. Beaufoy, member for Yarmouth, and which he rode, I believe, nearly seven years, I purchased lame in the whirl-bone, at five years old. In 1797, at nearly twenty years old he carried seventeen or eighteen stone, in the Hants Yeoman Cavalry.

(To be continued.)

TO THE EDITOR OF THE AMERICAN FARMER.

HORSE-POWER.

Sir,

Having stated and compared the useful effect of man's labour, in a variety of the most important modes, in which it is generally applied; let us now turn our attention to that of horses, and other draught animals.

The strength of an able bodied draught horse, is estimated, as might be expected, very differently, by different writers on the subject: some fixing it at that of five men; others at six, and some as high as seven: which last is perhaps nearest the truth. We are told by one author that two horses yoked to a plough, exert a force of 150 lbs. each; another informs us that he can draw with a force of 200 lbs. and travel 2½ miles per hour, for 8 hours in the day; or 240 lbs. for six hours. Another informs us that he can raise by means of pumps, 250 hhds. of water 10 feet high in an hour. This would require but four men for the same time. A third tells us, that on a level road, one horse can draw 25 cwt. on a cart weighing 10 cwt. with wheels 6 feet diameter: that in a common cart 2 horses can, with ease, draw 30 cwt.; in a common wagon 6 can draw 80, and in three carts they would draw 90, with more ease; and in six, 150 cwt. No doubt, the practical farmer is the best judge on these subjects. It is very desirable, however, to have an instrument capable of determining the absolute strength of horses, as well as of men and other animals. The best yet invented for this purpose is Regnier's *Dynanometer*. It consists of an elliptical ring, of spring tempered steel; to which is attached a brass plate with a graduated edge and moveable index, so contrived, as to point out the quantity of the force by which the sides of the ring are compressed. It could be easily procured, in either London or Paris; would cost but a trifle; is very portable, its whole weight being less than three pounds; and would not only afford a measure for the absolute strength of animals; but also the quantity of force, required to draw all kinds of agricultural implements: and thereby enable the farmer to apportion the physical strength, to the resistance to be overcome. It would also afford a fine field for competition at fairs and cattle shows.

Let the absolute strength of animals be what it may, the question of greatest moment is, how to apply that strength to the greatest advantage? Coulomb whose researches on these subjects, far exceed those of all others, both in extent and accuracy, has shewn that the mechanical action whch a man can exert, when travelling on a level road, exceeds that which he can endure, when ascending a flight of stairs, in the proportion of 3,500 to 205; or of 17 to 1 nearly: and surely no person could for a moment suppose, that a horse, mule, or ox, could travel up stairs with less fatigue, or to more advantage than a man. Now, turning a vertical wheel, by walking thereon, either inside or outside, requires an exertion, precisely similar to that of going up stairs; and consequently the application of animal power in the latter case, is not more unprofitable than in the former: and there, as just stated, it is diminished from 17 to one. The truth is, that all projects, and patentee pretentions on this and similar subjects, are founded on erroneous principles. Like the iofatuated herds, that run after perpetual motions, and other impossibilities, they imagine that certain combinations and applications of mechanical powers, can *create* force. But it is an immutable law of nature, that action and reaction, are always equal to each other, and take place in opposite directions. Hence it follows, that no combination, or arrangement of machinery, can exert more force than is communicated to it: and that the agent, or moving power. may communicate the greatest force, in a given portion of time, it is evident that it ought to act under the most favourable circumstances; but we have seen that the most favourable circumstances under which either man or beast can travel is that of walking on a level or horizontal path.

When a horse, mule, or ox, is placed over a vertical wheel, with his fore-feet on an immovable platform, he turns the wheel by the action of his hinder limbs; and the same quantity of action, would impel his whole body forward in a horizontal circle, of equal diameter with the wheel, with as great a velocity as he impels the wheel, and with far less labour. If he be placed on a moveable inclined plane; the exertion he has to make, is precisely the same, as would be requisite, to travel up stairs, having the same inclination, and at the rate with which the circumference of the moveable plane is driven. If then the useful effect of a man's force, in such an application of it, be but one seventeenth of what it would be on a level surface; it is not to be supposed that the force of any quadruped would be more advantageously applied. Besides, the awkward situation in which the animal is placed, and the unnatural muscular exertions it has to make, fret its temper, and strain its body, so as to render it, in a little time, entirely useless. It is, therefore, to be hoped, that humanity, as well as economy will intercede in favour of those invaluable animals which were, evidently, never labor of the intended for any such purpose, and restrict the stepping mill, exclusively, to the abandoned portion of the human species.

When rotatory machinery is to be driven by horse power, let the animal move in a horizontal circular path, not less than 30 feet in diameter. But the usual mode of attaching him to a revolving lever, by means of a single-tree and traces, causes, in consequence of the oblique direction of the draft, a loss of about ten per cent. of his force. To avoid this, the revolving beam or lever, should be fixed into the vertical axis, at such a height, that the animal could be placed under it. Two upright posts, are to be firmly morticed into this beam, at a proper distance, for the animal to stand, and walk between them. To the lower ends of these, the traces are to be connected, and of such a length, that, when the animal is in motion, the revolving beam may be right over the middle of his body; and the direction of the traces, or line of draught, should descend from his shoulders, about six or eight degrees; or 1 inch in 9, below the level. He will then exert his force to the greatest advantage; and consequently, produce the most useful effect.

J. D. C.

Editorial Correspondence.

THE TUSCANY CATTLE,

IMPORTED BY COM. BAINBRIDGE, AND PURSER HAMILTON, AND NOW IN SOUTH CAROLINA.

Charleston, January 20th, 1824.

DEAR SIR,

Your favour of the 20th November, I received on my return to town a few days since. The first calf of the Tuscan cow was a female, the second a male, and are doing well. The half blooded calves are strongly marked in figure and colour; I belive that one could select them out of the stock. I shall have about thirty of the half bloods by the spring; I intend keeping all the females, and about six of the males; the remainder I shall dispose of at a moderate price, to such as may wish to purchase. Since I last wrote, I have seen the gentleman who grew the crop of Guinea corn I was correct as to the quantity per acre, but his manager was mistaken, as to the weight; its weight is from 63 to 64 lbs. per bushel. I shall send you some of the grain by the Harvest, Capt. Emory, by whom I sent the Guinea grass seed, which I hope you have received. I intend planting ten acres the present season; I shall put it in small beds, five feet apart, and from two to two and a half feet apart on the bed; a few seeds in each hole will be sufficient. Attend it in the same manner as you would corn; plant about the 1st of May. In rich land the product is great, and on a poor soil it produces, I am informed, more than any other grain. It is not injured by water, that is to say, it will grow well in such land as may be partially covered in wet seasons. It has a discouraging appearance, until the heats of summer, when it grows rapidly, and will continue to put out heads until checked by the autumnal dews.

Your obedient serv't.

J. MIDDLETON.

REMARKABLE MANGEL WURTZEL.

Nottoway Court House, Jan. 12th, 1824.

DEAR SIR,

At a stated fall meeting of the Agricultural Society of Nottoway County, Virginia, Doctor Archibald A. Campbell, exhibited twelve mangel wurtzels, grown in his garden; the size of them were so far beyond any thing of the kind I have ever seen before, I was induced to weigh them; they weighed 152 lbs. averaging 16 3-4 each; the largest of them weighed 16 2-3; one of them measured 30 inches in length; they are of the mottled kind, and grow more out of the ground than any I have ever seen: from the well known properties of the mangel wurtzel, I am induced to believe they are far preferable to the common turnip or the ruta baga, whether as a food for cows or hogs; they are eaten with avidity by both.

I am, sir, with respect,
Your's &c.
N. WARD.

THATCHING HOUSES WITH STRAW—

HOW IS IT BEST DONE?

I wish some of your intelligent correspondents would favour your readers with the best mode of thatching houses with straw. I have had two houses thatched by men professing to be well acquainted with the business, neither of which have been capable of resisting the late winds.

The great scarcity of timber in many parts of our country, has rendered this mode of covering houses, cattle, and other shelters indispensable, and I know of no object more deserving the attention of our agricultural societies.

With great respect,
A SUBSCRIBER.

January 26, 1824.

* * *

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Piscataway Inspection Warehouse, commencing on the fifth day of October, eighteen hundred and twenty three, and ending on the fifth day of January, eighteen hundred and twenty-four.

	Domestic growth.	Growth not of this state.	Re-inspected.	Tota .
Number inspected.	140			140
Number delivered.	184			184

J. C. MOORE, Inspector.

TREASURY OFFICE, ANNAPOLIS, Jan. 22, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Taylor's Landing Warehouse, during the quarter, commencing on the third day of October, eighteen hundred and twenty-three, and ending on the third day of January, eighteen hundred and twenty-four.

	Domestic growth	Growth not of this state.	Re-inspected.	Total.
Number inspected.	16			16
Number delivered.	55			55

DAVID STEWART, Inspector.

TREASURY OFFICE, ANNAPOLIS, Jan. 20, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Upper Marlboro' Warehouse, during the quarter, commencing the ninth day of October, eighteen hundred and twenty-three, and ending the first day of January, eighteen hundred and twenty-four.

	Domestic growth.	Growth not of this state.	Re-inspected	Total.
Number inspected.	41			41
Number delivered.	180			180

SCOTT & SASSEER, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Jan. 20, 1824.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

* * *

Pyroligneous Acid.—Knowing the strong prepossessions of the people as to the use of all new articles, it was not supposed that the Pyroligneous acid for the curing of hams, and other species of animal flesh, would go into general use the first year; but notwithstanding all prejudices, several barrels were retailed to the citizens of Utica and its vicinity the last year; the result of which experiment was demenstrated beyond contradiction, that the smoking of hams and other kinds of meat in this way is altogether to be preferred.—Some of the most respectable gentlemen in this town have given it their decided approbation in several particulars. First, the hams are not exposed to any change or decomposition near the bone, as they many times suffer when the heat is carried too high while hanging in the smoke house; secondly, the hams may continue in pickle through the warm season without any particular attention, from which they may be cooked at any time, containing all those excellent qualities peculiar to that dish. The idea of drying hams has unquestionably arisen from necessity and not from any supposed improvement. Thirdly, no trouble is necessary, except to put one quart of acid to two hundred pounds of hams after they are sufficiently penetrated by the salt.—*Utica paper.*

☞ It is stated in the counties of Worcester, Middlesex, Norfolk and Bristol, Mass. there have been manufactured about 300,000 bonnets in a year, on an average price of $2 75 per bonnet, amounting to $125,000—employing 25,000 persons, most of whom are females, from the age of four to twenty years. Those employed in platting the straw have been enabled to support themselves, and in many instances to assist those of their immediate friends in destitute circumstances. The business now is at a stand. The bonnets that three years ago, would command $2 75, will now not sell for more than $1 25.

From Brewster's Philosophical Journal.

REMARKS ON THE PHENOMENA OF THE
FALL OF THE LEAF.

The phenomena of the fall of the leaf in autumn has been variously accounted for. The learned and eloquent President of the Linnean Society has presumed it dependent on the maturation and expansion or swell of the bud, and this opinion has been adopted by others. M. Vaucher ingeniously compromises the question by considering the leaf *soldered* or cemented to the twig. This latter hypothesis is soon discussed. The most careless observer can discover the continuity of the vessels. The experiment is a very simple one. Let a leaf be torn from the twig, and a portion of bark and wood follows. When the leaf assumes the autumnal tint, then indeed, as with the ash, &c. it *may be* insulated, but the leaf is now *dead*, the vessels of supply no longer minister their living juices,—its veins are exhausted, and it hangs a withered appendage, and prey to the first autumnal breeze.

These are, in like manner, circumstances which do not harmonize with the first opinion: but to mention the fall of the early blossom in an analogous relation, the sudden denudation of the mulberry tree, without any change of colour, by early frost, shews us that the cause may act *suddenly* and *prematurely*, and must be *something distinct from the dimensional increase of the bud.*

The sap has its periodical revolution, and as it moves in its channel, acted on and influenced by the vicissitudes of an atmosphere ever varying its *density*, and the *thermometric*, *hygrometric* and *electrical* relations of which are always fluctuating, it must change its pulse conformably; and the flux of its stream must correspond with the circumstance on which it hinges, and by which it is accelerated or retarded, regulated or checked.

The spring gives an animating stimulus to the *punctum saliens* of vegetation, which is thus aroused from its *hybernaculum*, and the tree then assumes its beauteous and refreshing mantle of green. This is succeeded, as the season advances, by the blossom and the fruit.

Now, the sap must not only be much varied in its periodic times of revolution, but be obedient to the external agents enumerated, and thus will the character of its deposits be essentially changed. The sap, at first rapid, becomes, as the sun advances toward the tropic of Capricorn, more languid in its course. The tints of autumnal foliage are the external insignia which announce the changes that take place. The gradual disunion and final fall of the leaf is connected with the gradual contraction and close of the anastomosing vessels, and this constriction is the consequence of a loss of caloric, by reason of *radiation* to the unclouded sky, or in the absence of the illuminating sunbeam, dark weather. All circumstances being the same, the amount of denudation will have a faithful correspondence with the phenomena which favor radiation; and I am persuaded, from repeated observation, that the leaves which strew the brooks are more numerous in the evening, and at night, than during day, when the calorific impressions of the sunbeam play on the leafy surface.

There is a phenomenon which I do not remember to have seen any where estimated, though it seems to me to add force to the opinion presumed. In the *beech* and *oak*, &c. particularly in the former, the leaves begin to fall from the *tips* of the twigs or branches, and are shed *gradually downward:* now this is in exact conformity with what should happen in consequence of radiation; the lower foliage is protected from its effects by that above it, the last, being lowered in temperature, falls, and exposes that leafage which before was comparatively concealed and sheltered; it falls in turn, and is succeeded by the next, &c.—We cannot suppose this phenomenon connected with the gradual retirement of the sap from the extremities of the branches. The twig can never be wholly exhausted of sap;—the circulation is comparatively languid, and its action torpid; but were it to evacuate the branch entirely, it must cease to live. In torpid animals the circulation continue, though reduced to its lowest ebb. Experiment has determined this, and the analogy holds good.

In Spring, the temperature acquired by absorption *more* than counterbalances the loss sustained by *radiation*, while in autumn this last is a *maximum*. In very early spring, the premature blossom is often cut off by the sudden contraction of the vessels which supply it

By watering the early bloom before sunrise, the fatal consequence referred to is perhaps prevented; because the effects of radiation are modified by a film of aqueous vapour; or the previously contracted vessels are softened.

Mr. Cooper, in his Dictionary of Surgery, gives the following recipe as infallible for the cure of corns. Take two ounces of gum ammoniac, two ounces of yellow wax, six drachms of verdigris, melt them together, and spread the composition on a piece of soft leather or linen; cut away as much of the corn as you can with a knife, before you apply the plaster, which must be renewed in a fortnight, if the corn is not by that time gone.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 6, 1824

☞ We shall be blamed, at the first glance of it, for publishing an article in one paper, so long as Mr. Bates' address. All we have to ask in extenuation or justification is, that we be not condemned, until the address is *read*. The views of political economy it exhibits are profound, and yet *clearly* and simply expressed, a great excellence in writing on that subject—but they are not so clearly conveyed as not to requre it to be read with *attention*. The *subject* does not admit of that—studies of this nature are as necessary to young Farmers, who would understand their interests and their rights, as experience is to a practical workman. We would recommend that such papers be read at the family fireside—and aloud by the farmer's son. Thus will amusement be mixed with utility, and the ideas and truths they convey will in this way be imparted at the same time to several minds instead of one. As to the *application* of Mr. Bates' premises, that is another matter—about which our readers can form their own judgment. The reasoning may be clear and good, which leads us to perceive and understand important truths in political economy; and yet those truths may be used in attempting to establish ulterior positions and hypotheses, which are not tenable. The benefit which *agriculture* is to receive from an increase of duties on imported articles cousumed by the farmer, and paid for with his products, will be better understood when we come to publish some additional papers on the score of its expediency—in the mean time, those who would deny or affirm the constitutional power of Congress to enact such an increase, with an exclusive view to the encouragement of particular branches of domestic industry, are respectfully referred to the able essay under the signature of RURIS CONSULTUS, in number 42 of this volume.

For the very interesting and eloquent address of Mr. Bates, we are indebted to the kindness of the Dickinson Library Company.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Wharf flour, $5 37½—Western country do. $6 50 to 5 62½—Best family do. retail, $7—Wheat, $1 12 to $1 15—Corn, 35 cts.—Rye, 40 cts.—Oats, 28 to 30 cts.—Whiskey, 23 to 25—Pork, $4 50—Beef, northern mess, per bbl. $10—Cargo, No. 1, $8 to 8 50—do. No. 2, $6—Baltimore prime, $10—Bacon and hams, 10 to 11 cts. Butter for exportation, 8 to 12 cts—Cotton, W. I. Island, 18 to 20 cts.—Louisiana, &c. 16 to 17 cts.—Georgia upland, 14 to 16 cts.—Alabama, 12 to 13 cts.—Candles, mould, 12 to 13 cts.—Dipt, 10 to 11 cts.—Spermaciti, 25—Feathers, live, 30 to 35 cts.—Fish, herrings, Susquehanna, $2 75—Fall mackarel, No. 1, to 3, $4 50 to $7—Shad, trimmed, $6 to 6 50—Flax seed, rough, per bushel, 70 to 75 cts.—cleaned, cask, $8—Flax, per lb. 10 to 11 cts.—Hemp, Russia, $1 75 ton,—Country dew ret, 7 cts. per lb.—do water rot, 9 cts.—Hops, fresh, 35 cts. per lb.—Hides, dryed, 15 to 19 cts. per lb.—Hog's lard, 12 cts. per lb.—Lime, per bushel, 30 to 33 cts—Leather, soal, best, 24 to 27 cts. per lb.—do. Eastern tan, 18 to 20 cts—Lumber, board measurment, cargo prices:—Of the following articles we give the yard prices.—Oak timber and scant. $1 to 1 25—Boards all sizes, $1 50 to 2—Pine scantling, do. $1 to 1 25—Boards 4-4, $1 to 1 25—White do. 5 4, $1 75 to 2 50—do. co. 4-4, $1 15 to 1 30—do. cl. 4-4, $1 80—Shingles, cyp 18 in.—$3 to 3 50—Shingles, junip. 24 do. $7 50 to 7 75—jun. com. $3 50 to 5—Staves, W. O. pipe, $40 to 45—do. hhd. $25—do bbl. $15 to 17—R. O. bbl. $15—do. hhd. $17—Wool, fleece, merino full blood, 35 to 40 cts. per lb.—Cropped, 28 to 30 cts.—Common country, 20 to 30 cts.—Skinner, 35 to 40 cts.—When assorted and cleaned, any of the above will obtain an advance of 15 to 20 cts.

Retail prices of marketing.—Beef, prime pieces, 10 cts.—Veal, 8 cts.—Mutton, 6 to 7 cts.—Turkeys, 75 cts. to 1 25—Geese, 50 to 75 cts.—Ducks, Canvasbacks, $1 25 to 2—Red heads, 75 cts. to $1—Chickens per pair, 50 to 62½ cts.—Eggs, 15 to 18 cts.—Butter, 1st quality, 25 to 37½ cts.—Turnips, per bushel, 50 cts.—Potatoes, do. 50 cts.—Parsnips, do. 62½ cts.—Celery, 8 to 10 cts.—Carrots, 4 to 6 cts.—Cabbages, 2 cts. &c. &c.

CONTENTS OF THIS NUMBER.

AN ADDRSSS to the Hampshire, Franklin and Hampden Agricultural Society, by I. C. Bates, Esq—ADVICE TO YOUNG FARMERS, on the appellatives, qualities, habits and defects of horses—HORSE POWER—THE TUSCANY CATTLE, imported by Com Bainbridge, and Purser Hamilton—Remarkable mangel wurtzel—Thatching houses with straw—Tobacco reports—Pyroligneous acid—Bonnets manufactured in Massachusetts—Remarks on the phenomena of the fall of the leaf—Recipe for the cure of corns, by Mr. Cooper—Prices current, &c. &c.

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Political Economy.

TO THE EDITOR OF THE AMERICAN FARMER.

LETTER II.

Dear Sir,

Although I utterly disclaim the mere authority of great names, either for, or against any particular doctrine, the truth or error of which can be tested by reason; yet I have always deemed it fair to hurl such missiles at any man's head, who first throws them at yours. It was upon this principle that I promised in my first letter, to attempt to prove that the justly praised Hamilton—not *Matthew*, but *Alexander*, never did maintain any such heresies in political economy, as have so often, and so triumphantly been ascribed to him. On the contrary, I shall proceed to show,—and by the very report too, from which these heresies have been so strangely extorted, that the aforesaid *Alexander* Hamilton took special care every where to speak of the encouragement of manufactures by duties upon imports, as incidental to the raising of revenue; and as a measure which should *never be attempted by any rate of duty that was likely to injure either agriculture or commerce.*

In doing this I shall begin with his first report made in pursuance of a call from Congress for some project to support public credit. This report was dated 9th of Jan 1790, from which it will be needless to make more than the following extracts. In speaking of the advantages of a well established public credit, with a small public debt, he observes that among the various and obvious benefits resulting from, it may be reckoned—

First—"Trade is extended by it; because there is a larger capital to carry it on, and the merchant can at the same time afford to trade on smaller profits; and his stock, which when unemployed, brings him in an interest from the government, serves him also as money, when he has a call for it in his commercial speculations."

Second—"Agriculture and *Manufactures* are also promoted by it; for the like reason, that more capital can be commanded to be employed in both; and because the merchant whose enterprize in foreign trade gives to *them* activity and extension, has greater means of enterprise."

Again, in the same report, in recommending a provision for the public debt, after showing that a larger sum would be wanted for that object, than would accrue from the existing rates of duty, he goes on to say;—"This sum may be obtained from the present duties on imports and tonnage, with the additions which, *without any possible disadvantage either to trade, or agriculture*, may be made on wines, spirits, including those distilled within the United States, teas and coffee."

"The Secretary conceives, that it will be sound policy, to carry duties upon articles of this kind, as high as *will be consistent with the practicability of a safe collection.* This will lessen the necessity, both of having recourse to direct taxation, *and of accumulating duties where they would be more inconvenient to trade, and upon objects which are more to be regarded as necessaries of life.*"

Without saying how far these opinions accord with my own, it is sufficient for my present purpose to remark that these extracts demonstrate, as clearly as the light of day, that Mr. Hamilton had then no idea that protection to manufactures should be carried so far, as to interfere either with agriculture, or commerce; still less to put them in jeopardy, as the proposed enormous augmentation must inevitably do, or *to produce a necessity for direct taxes*, or *to raise the prices of articles which may be regarded as the necessaries of life.*" On the contrary, it is most manifest that *he* considered any measures which furnished the merchants particularly, with the means of greater enterprise, as calculated to give *activity and extension both to manufactures and agriculture.*

The report on public credit was sent to Congress early in January, 1790; and on the 15th of the same month a resolution passed, referring to the Secretary the subject of manufactures. This produced his celebrated report so often quoted of late years, as unanswerable, by men who would not *then* have taken his opinion for any thing; nor even have treated his character with common christian charity.

In this important state paper, although Mr. Hamilton goes so far as to recommend even bounties and premiums in addition to protecting duties, it is perfectly clear from the whole tenor of his opinions and reasoning, that he never considered manufactures entitled to *any permanently exclusive privileges;* or that they should be favoured at the risk of injuring any of the great interests of the country: in particular he never contemplated such high duties on foreign commodities, as now *exist;* or that even the moderate advance which he recommended, *should be of long duration.* To prove this point the more clearly and satisfactorily, I shall give a fair specimen of his reasoning, both against and for us. First, in allusion to the common arguments for preferring agricultural industry to that employed in manufactures, he says;—"This mode of reasoning is founded upon facts and principles, which have certainly *respectable pretensions. If it had governed the conduct of nations more generally than it has done, there is room to suppose, that it might have carried them faster to prosperity, and greatness, than they have obtained by the pursuit of maxims too widely opposite.* Most general theories however, admit of numerous exceptions; and there are few, if any, of the political kind, which do not blend a considerable portion of error, with the truths they indicate.

"In order to an accurate judgment, how far that which has been just stated, ought to be deemed liable to a similar imputation, it is necessary to advert carefully to the considerations which plead in favour of manufactures, and which appear to recommend the special and positive encouragement of them *in certain cases, and under certain reasonable limitations.*"

Who would not imagine after such an emphatic recommendation to do something "*special and positive*" for manufactures, that the next suggestion would be a set of rates of duty nearly, if not quite equal to the present. But when we come to notice the application, (as we presently shall,) of the foregoing general reasoning, how much surprised will those be who never read his report, to find that some articles then subject to duty, he proposed to exempt entirely; on others he advised that the existing duties should remain as they were; and on none of the important articles of cotton, wool, iron, brass, books, leather, linen, &c. did he recommend a higher duty than 7½ per cent. What then, shall we say of the attempt made by the manufacturers of the present day, and their friends, to found the wild and extravagant pretensions which they now set up, on this celebrated paper of the much abused Mr Hamilton. In this it is every where clearly seen, that whatever encouragement or protection he recommended for manufactures either by duties, bounties, or pensions, was never designed to interfere with other branches of national industry: as a farther confirmation of which the whole tenor of the report, as well as all the particular parts thereof specially applicable to the subject, develope this opinion; that *these duties and bounties should be highest at the commencement of the manufactures intended to be promoted by them; and that if they did not succeed within a reasonable time, the government ought to abandon them.* The very reverse of this, is the policy which our manufacturers are continually and most importunately demanding; for what else do *they* claim but such constant augmentation every 3, 4 or 5 years, as will at last enable them to realise any air-castle which they choose to build; the only subject of enquiry and solicitude with them, being to exclude foreign competition, no matter who pays for it, so they do not.

In speaking of bounties, which Mr. Hamilton considered of the same nature with high duties, he says;—"The continuance of bounties on manufactures long established, *must almost always be questionable policy;* because a presumption would arise in every such case, *that there were natural and inherent impediments to success.*"

How widely different is this remark from the doctrines so pertinaciously ascribed to him in all the numerous publications which we have seen, purporting to be only a new version of his opinions. And how much at war with it, are the repeated demands for additional duties to protect certain manufactures which their friends cry out have not yet got enough, although from the time of the first tariff to the present moment they have been continually receiving more and more of this sort of encouragement.

Keeping these introductory extracts and observations in view, let us now see what protection the Secretary actually did recommend, and also the particular articles selected by him to be favoured by duties.

The material which he deemed of far superior importance to all the rest, was iron: and what did he propose to do for that? Why, simply to raise the duty of 75 cents per cwt. on steel, to 100 cents; the duty of 1 cent per lb. on nails and spikes, to 2 cents; on fire arms and other military weapons to 15 per cent; and on all other manufactures of iron or of which it was the material of chief value, 10 per cent.—iron in pigs and bars he advised to exempt from all duty.

Brass and copper wares he proposed, should be rated at 7½ per cent.—the 1st having been 5, and the last 7½. He merely suggests for consideration! whether they might not bear 10 per cent: the raw materials of both, he advised to admit free of duty.

On lead he thought the existing duty sufficient; the 7½ per cent on pewter wares, he believed might bear a little increase, but this was not pressed.

On fossil coal he proposed no duty. In regard to skins, after speaking of their manufacture as highly important to the country, he advises that the existing duty of 7½ per cent. should remain as it was; that on glue he was for raising to 15 per cent.

I will here give a single remark of Mr. H. in relation to this article, (and it is applicable to all the rest,) as worthy of particular attention; because it explains as clearly as a whole volume would do, the leading principles of his report, and the striking difference of his views, from the views of those who are so fond of quoting him.—Speaking of the manufacture of leather he says, "There may also be this argument in favour of an increase of duty. The object is of importance enough to claim decisive encouragement, and the progress which has been made, *leaves no room to apprehend any inconvenience on the score of supply, from such an increase.*" Now what does this amount to, but in other words, to say that no augmentation of duty on any article which we are in the habit of importing, should ever be made so high, as to subject us to the hazard of a scanty supply, or to the manifest privation and trouble which would accrue from our having to wait for it, until we could get it of home make.

Yet the men who claim Mr. Hamilton's opinions as their own, would not only subject us to all this risk and inconvenience, but compel us to pay for their schooling, while learning to fabricate the very articles of which we are to be deprived, by the political self-murder, now proffered for our acceptance.

But to proceed with the Secretary's tariff. On ardent spirits, he recommended a duty of no more than 2 cents per gallon, of the first class of proof, and a proportionate increase on those of higher proof—on malt liquors, 8 cents a gallon generally.

The duty on starch, hair powder, and wafers he advised to be raised to 15 per cent.

Sailcloth he proposed to class among articles rated at 10 per cent —and as to drillings, tickenlenberg, dowlass, canvass, brown rolls, bagging, and all low priced linens, he merely suggests—without urging it, that the duty should be raised to 7½ per cent.

As to cotton, he actually recommended a repeal of the existing duty of 3 cents per lb.; and advises that the 7½ per cent. on certain kinds of cotton goods, should not be extended to all kinds of which cotton was the principal material.

The only protection which he proposed for manufactured wool, was a small bounty, for improving the breed of sheep instead of a duty!! to be derived from the addition of 2 per cent. on carpets and carpeting.

The raw material silk, he recommended to exempt from all duty, leaving the existing rate of 5 per cent. on manufactured silk to stand as it was.

The existing duty of 12½ per cent. on glass, and 10 per cent. on gun powder, he deemed quite sufficient. That on paper he also thought as high as it need be; and on printed books, the duty of 5 per cent. he proposed to raise to 10 per cent.

In regard to refined sugars and chocolate, he recommended that a draw back of the duty on the raw material should be allowed on the exportation; and that 2 cents per lb. should be laid on imported chocolate, instead of the existing duty of 5 per cent. ad valorem.

Nothing was done by Congress with this report, but a year after, at their next session, upon finding more revenue necessary, they again called upon the Secretary by a resolution dated 8th March, 1792, to say what would be the most eligible mode of raising the supplies. On the 16th of the same month he reported, and named the three following modes, viz. selling United States' stock—loan, and additional taxes and duties—the last of which he preferred.

After remarking that the interests of commerce, are always greatly injured by frequent and unexpected alterations in the rates of duty on the objects of trade, and regretting that so early a resort to new demands, on the mercantile class, should be the made—he concludes the subject of the additional duties which he recommends, by the following paragraph.

"The addition of 2½ per cent. to the duty on the mass of articles now rated at 5 per cent." (among which were cotton and woollen goods, manufactures of iron, brass, copper, linens, books, &c.) "will constitute an important, though not an extensive augmentation. Nevertheless *it is proposed, that it shall be but temporary*, and there is reasonable ground for expectation, that the cause for having recourse to it, will not be of very long continuance!"

It is needless to add farther quotations to prove the position with which I commenced. They speak a language which a child may understand; and if any man in his sober senses will read them deliberately, and afterwards assert that there is the slightest grounds for imputing to Mr. Hamilton any opinions in regard to the encouragement of manufactures, at all resembling such as are continually hawked about the country for his, I can only say that such man has at least 50 per cent. more of that very efficient commodity called impudence, than would suffice to effect any purpose, towards the achievement of which the said article was the material of chief value.

Yours very truly,

RURIS CONSULTUS.

P. S. One more letter Mr. Editor, and I shall be done; for I confess to you, that I am sick at heart, from the prospect of the enormous oppression with which both agriculture and commerce are threatened, by this new tariff bill.

AGRICULTURE.

VIRGINIA AGRICULTURAL SHOW.

Report of the committee appointed to prepare for publication an account of the second Fredericksburg Agricultural Show and Fair.

The committee congratulate the Society, and their fellow citizens at large, upon the proud result of the second Show of the Fredericksburg Agricultural Society. The pleasing anticipations indulged in, after the Show of last year, have been more than realized on the recent occasion.

Notwithstanding the badness of the weather during the greater part of the two previous days, must have prevented the attendance of many who lived at a distance, yet the concourse of spectators was much greater than had been witnessed on any occasion in this town for many years. Great gratification was expressed on all hands, at the spirit which manifested itself among this very unusual assemblage of amateur agriculturists. The Society gained an accession of 74 members—many of them men of established reputation in their profession. Indeed, the benefit both to town and country, has now become so obvious to all, that it is hoped and believed, that very few who are within reach of it, will hereafter withhold their aid from an institution which has been languishing for several years under all those discouragements resulting from the lukewarmness and apathy of the very class for whose chief advantage it was originally organized.—But we are happy to add, that these obstacles appear, at last, to be nearly overcome by the irresistible evidence of such facts as speak both to the hearts and understandings of all who have paid the least attention to them. There is scarcely a farmer of any standing, within a convenient distance from Fredericksburg, but has become a member; and many of those whose means are most limited, are among the most zealous contributors to the continuance and prosperity of the society. Several patriotic individuals of other professions have also united in support of the good cause; and to crown the whole, all the beauty and fashion, and good housewifery of the town and adjacent country, have not only manifested their cordial good wishes for our success, but have made such a display of their taste, their industry, and their skill, in the number, kind and quality of the articles of household manufacture exhibited by them on the late occasion, as reflects lasting honor, both on themselves and on the country of which they are the brightest and mostly highly valued ornaments. With such support, and such encouragement, the sons of agriculture need fear nothing. Let them only do *their part* towards the promotion of good husbandry, and they may feel the most perfect reliance on the perseverance and fidelity with which their wives, and daughters, and sisters, will perform *theirs*, in the same truly honorable cause.

The Show took place on the 12th and 13th November, on the ground that was occupied for the same purpose last year, in the lots of Mr. John S Thornton, on the Western side of the town.

The first day was devoted to the exhibition of Stock, and was closed with an address from James M. Garnett, President of the Society.

The second day was occupied with the examination of Agricultural Implements, trial of Ploughs, and an exhibition of Domestic Manufactures. This latter display was originally intended to have been on the ground where the other exhibitions were made, but on the eve of the occasion it was determined, with a view to the better accommodation of the ladies, whose presence was earnestly desired, that it should take place in the Town Hall. This unfortunate step deprived the exhibition of much of its splendor. Owing to the insufficient size of the room, and the total absence of counters on which to expose the goods, many of them could not be shown to advantage; and so great was the crowd who anxiously pressed in, that hundreds were compelled to retire without being able to gratify their laudable curiosity. The committee indulge the hope, that on a future occasion, their brethren will profit by the experience of this, and adopt better regulations. This day was closed with the distribution of Premiums on the ground—and the show, notwithstanding some little drawbacks, the natural consequence of inexperience in those things, terminated in a manner highly gratifying to all who witnessed it.

The following condensed statement of the manner in which the Premiums were awarded, is taken from the reports of the several Committees.

Horses, Mares and Colts.

A *Silver Pitcher*, with an emblematic device and inscription, value $30, was awarded to Mr. John Graves, of Louisa, for his horse Florizel, 11 years old, got by old Florizel, out of a Spread Eagle mare, as the best Stallion. But, the Committee remark that had Judge Stewart, of Staunton, been a member of the Society, his horse Eagle, which was shewn by Mr. James Coleman, of Orange, would have had the unanimous vote of the committee.

A *Silver Pitcher*, value $25, with inscription and device, was also awarded to Mr. Graves, for his Mare 4th of July, four years old, a full sister to Florizel, as the best brood mare.

A *Silver Pitcher*, value $25, with device and inscription, was awarded to Mr. Lawrence Ashton of King George, for the best saddle horse, a Bay Gelding.

A *Silver Goblet*, value $17, was awarded to Mr. Jeremiah Wilson, of Spotsylvania, for his Colt *Premium*, two years old—got by Friendship, out of a Hyatoga mare, as the best colt exhibited.

N. B. There were shown 7 Stallions—10 saddle Horses and Mares—7 Brood Mares, and 9 Colts. There were several other fine animals brought upon the ground, and intended to be exhibited, but were excluded by the rules of the Society, for not being entered in time. It is hoped, that gentlemen intending to exhibit Stock on a future occasion, will be more attentive to their own interest, and comply in time with the rules of the Society.

Horned Cattle.

A *Silver Pitcher*, value $25, was awarded to Col. George Love, of Fauquier, for his Bull, Comet, the only one exhibited.

A beautiful Silver *Cream Cup*, value $20, was awarded to Mr. Thomas B. Barton, of Fredericksburg, for the best Milch Cow.

A Silver *Cream Cup*, value $15, was awarded to Mr. William Bernard, of Mansfield, for the second best Milch Cow

A Silver *Cream Cup*, value $17, was also awarded to Mr. William Bernard, for the best heifer.

A Cup, value $20, was awarded to Mr. Alexander Sorrell, of Fredericksburg, for the best Beef.—☞ This beef was raised in Culpepper, by captain John Turner, and sold by him, with a drove, to Mr. Sorrell.

Sheep.

Two Cups of the value of $15 each, were awarded to Mr. John Gray, of Travellers' Rest, for a Ram and Ewe. They were the only two exhibited.

A Cup, value $15, was awarded to Capt. Wm. Jackson, Jr. of Spotsylvania, for the best Mutton.

Hogs.

A Cup, value $15, was awarded to Mr. Wm. Smalley, for his Boar, being the only one shown.

A Cup, value $15, was awarded to Mr. Horace Haislip, for his Sow, being the only one shown.

Agricultural Implements.

A Cup, with device and inscription, value $15, was awarded to Mr Jacob Gore, of Fredericksburg, for an improved Wheat Fan, the only one shown. The superior excellence of this Wheat Fan principally consists in the ease with which motion is communicated to the sifter. The committee respectfully recommend Mr. Gore to their brother agriculturists, as an ingenious and deserving mechanic.

A discretionary premium of $10, was awarded to Capt. Wm. Jackson, Jr for a very cheap and excellent Machine for sowing and rolling at the same time, small grass seed. The whole cost of this machine will probably not exceed $6 or $7, and may be made by any common carpenter.

A discretionary Premium of $5 was awarded to Mr. —— Minor, of Hanover, for a Drill Plough, for planting Corn—being the same, a model of which was shown last year.

Although the Ploughs exhibited by Messrs. McCormick & Stewart were excellent, the Committee awarded no Premium—as they considered Mr. McCormick's almost identically a similar Plough to the one for which he obtained a Premium last year—and Mr. Stewart's three Ploughs nothing more than good imitations of McCormick's.

The model of a very ingenious Machine for receiving and saving Wheat from the scythe, was exhibited by Mr. Geo. Banks, of Stafford; but being a model only, the committee did not deem themselves authorised to award a Premium for it; although, as far as they could judge, without an actual trial, they were disposed to think very favourably of its utility.

An improved Machine for getting out Wheat, Barley, Rye, and Oats, and for grinding grain, made by Mr. William Boadler, of Culpepper, unluckily arrived too late in the evening of the second day to be examined; but those who have actually tried it, speak highly of its power to do all that the improvement promises for it.

As some surprise may be felt at our committees having awarded Premiums where there was no competition—viz: in the cases of the Bull, Ram, Ewe, Boar, Sow, and Wheat Fan—we beg leave to assign their reasons. It is simply the hope, (a forlorn one, we fear,) that by this means they may at last stimulate the proprietors of fine Stock—at least those who live at no great distance, to send some of them to our Exhibitions. Their most unaccountable neglect in this particular, will scarcely be credited by our Brother Farmers to the North, whose fine displays of every kind of Stock, at all their Agricultural Shows and Fairs, have deservedly acquired for them such well merited praise and distinction.

Domestic Manufactures.

Carpets.—There were 7 specimens exhibited, all excellent. A silver Cup, value $15, was awarded to Mrs. Frances Hawes, of Culpepper, for the best.

Table Cloths.—There were 7 specimens exhibited. A pair of Sugar Tongs, value $5, were awarded to Mrs. F. Hawes, of Culpepper, for the best—a beautiful Linen Damask, wrought from Flax, raised by Dr. Aylett Hawes.

Bed-Ticks—Five specimens were exhibited. The Premium of 1 doz Tea Spoons, value $10, was awarded to Mrs F. Hawes, of Culpepper, for the best.

Counterpanes, wool and cotton mixed.—*Fifteen* specimens were exhibited. A Silver Soup Spoon, of the value of $12 50, was awarded to Mrs. —— McCormick, of Fauquier, for the best.

Counterpanes of Cotton.—FORTY specimens were shown. A Silver Soup Spoon, value $11 80 was awarded to Mrs. Geo. Buckner, of Carolina, for the best.

Hearth Rugs.—Five specimens were exhibited. The Premium of a pair of Sugar Tongs, value $5, was awarded to Miss Mary Cady, of Fredericksburg, for the best—wrought entirely of domestic materials.

Butter.—*Fifteen* specimens were exhibited; ten of which were so excellent that the Committee, although they made *repeated* and *pleasing* trials, could not conscientiously decide which was the best. They therefore declined awarding any premium for Butter!—They respectfully suggest to the respectable Housewives who have shown so much skill in the preparation of this delicious article, to send a portion of the products of their Dairy to the Fredericksburg market, where the supply is by no means abundant or regular, and where a good quality always commands a good price.

Cheese.—Three specimens only were exhibited. A Premium of Six Tea Spoons, value $5, was awarded to Mr. Wm. Benton for the best. It was made on the Farm of President Monroe, in Loudon. The manufacture of Cheese is yet in its infancy in this State; but from the specimens shown, and from the spirit of emulation already awakened, we look forward to an early day, when our Tables will be independent of a foreign supply for this article. The specimen shown by Mr. Waller Holladay, promised to be very fine when it shall attain more age.

Discretionary Premiums.

The rich variety and superior excellence of the articles for which premiums were offered, so far surpassed the expectation of the committee; and our meritorious housewives displayed so laudable an emulation in sending forward for exhibition a great number of beautiful articles for which no premiums were offered, that the committee gladly avail themselves of the power given them by the rules of the society, in awarding the following discretionary premiums, as an expression of their high sense of the value of our *household manufactures* and the great merit of those ladies who have thus set so laudable an example to our country—Viz

To Mr. Robert H. Rose, of Fauquier, for the 2d best Carpet, $5.

To Mrs. Byrd, of Stafford, for the 2d best Hearth Rug, $4.

To Col. Geo. Love, of Fauquier, fot a pair of black Worsted Stockings, wrought by his daughter, $2 50.

To Mr. John S. Slaughter, of Culpepper, for pair of 10-4 Blankets, $5.

To Mr. Wm Slaughter, of Culpepper, one pair do. $3.

To Miss Dorcas Horn, of Spotsylvania, for a fine wove Valen, $2 50.

To Miss Sarah M. Horn, of Do. for Do. $2 50.

To Miss —— Noel, of Spotsylvania, for a Bed Canopy of singular fineness and beauty, $2 50.

To. Mr. Hezekiah Ellis, of Spotsylvania, for a piece of linen drilling, $2 50.

To Miss —— Dermitt, for a Valen, $2 50.

To Mrs. John B. Woodford, of Caroline, for a Toilet Cover, $2 50.

To Miss Ann Seddon, of Fredericksburg, ditto, $2 50.

To Miss —— Andrews, for a piece of domestic Plaid, $2 50.

To Miss Dorcas Bryant, for do. do. $5.

To Mrs. Martha Fitzhugh, of Fauquier, for a piece of Swansdown Vesting, two pieces of Plaid and one piece of Satteen, $5.

To Miss Susan Parrott, of Fredericksburg, for a pair of richly wrought Crickets, $2.

There were also exhibited a variety of other articles, not named, which excited general attention—particularly two specimens of thread Lace of singular fineness, wrought by Miss Nancy Seddon of Stafford, and a piece of blue Cassinett, exhibited by Mrs. Hawes, the successful competitor for the three first articles on the above list, which the committee deemed the finest specimen of domestic cloth they had ever seen.

OFFICAL ACCOUNT

Of the Proceedings of the Fredericksburg Agricultural Society at their late meeting; and of their Agricultural Show.

The Society met, according to notice, at the Indian Queen Tavern, at 9 o'clock, on the morning of the 12th November, and continued its session by adjournments, until the evening of the 13th.

The following Gentlemen were elected officers for the ensuing year:

James M Garnett, President; John Taliaferro, (of Hagley,) Vice President; William F. Gray, Secretary; John T Ford, Assistant Secretary; R. S. Chew, Treasurer.

Corresponding Committee.

John Taliaferro, Robert Lewis, Garrit Minor, Enoch Mason, William F. Gray.

The following Committees for awarding Premiums were appointed by the president, viz.:

On Horses, Mares and Colts.

Francis W. Taliafero, James Smock, Wm. C. Willis, Geo. N. Grymes, Wm. Bernard.

On Beef, Bulls, Milch Cows and Heifers.

John Taliaferro, Geo. Hamilton, Geo. Banks, Geo. Buckner, Enoch Mason.

On Mutton, Sheep and Hogs.

Robert Lewis, Geo. Love, John T. Ford, John Dade, Wm Richardson.

On Domestic Manufactures.

Geo. Hamilton, Horace Marshall, John S. Wellford, Alex. F. Rose, John Graves.

On Agricultural Implements, and trial of Ploughs.

Wm. Bernard, F W. Taliaferro, Thos. Brown, Walter Holladay, John G. Stuart.

Marshalls.

Wm. Jackson, Jr. Henry Thompson, Robert Ellis.

Ordered, That H. Marshall and J. T. Ford, be appointed a committee for settling any accounts, that may be brought against the Society, for expenses incurred in the arrangements for the Exhibition.

Ordered, That the Treasurer pay the amount of the discretionary premiums, awarded by the several Committees, either to the successful candidates, or other persons authorised to receive them.

On motion of Major J. Richards,

Ordered, That the Trrasurer pay the sum of $2 to the Ploughman, (John, the slave of Mr. H. Thompson,) who assisted in the trial of Ploughs.

The President having retired—Capt. R. Lewis in the chair.

On motion of Col. Geo. Love, seconded by Major J Richards—it was

Resolved, That the thanks of this Society be voted to their President, Secretary and Treasurer, for their laborious services to the Society:—and that a cup, with appropriate devices be presented to each of them: that for the President to be of the value of $20, and those for the Secretary and Treasurer of the value of $10 each—and that the Treasurer be authorised to procure them out of the funds of the Society.

Extracts from the Minutes.

W. F. GRAY, *Sec.*

From the Philadel. American Daily Advertiser.

FATTING SWINE.

BELMONT, Dec. 10, 1823.

Mr. Poulson—Several of my neighbors have recently suffered heavy losses, by diseases fatal to *fatting swine;* when preventive precautions had not been taken. With the view to avert such misfortunes, when I farmed, on an extensive scale previously to and since the revolutionary war, I tried many experimints in precautionary measures, as well as in cures I most frequently failed in the latter; but at length I adverted to my having been informed of a simple *preventive;* which I can confidently declare, has, with me always succeeded. That I might be certain of this point, I have fortified my recollection by inquiry of an old farming laborer, who is yet in my employ, and who had the charge of fatting my hogs, in pens, during a great portion of the time since the close of that war. He recollects the loss of one hog only; and *that* by improper feeding. I deem it incumbent on me to re-publish; under a hope that the subject of it may be as beneficial to others as it has been to me; part of a note to a communication I made to *The Philadelphia Society for Promoting Agriculture*, March 8th, 1808; see vol. 1st. *Memoirs of the Society*—page 229.

"But sour food is the most grateful and alimentary to swine. One gallon of sour wash, goes further than two of sweet." I mean the wash *acidulated* to the degree required for distillation—not *acetous.*

"DRY ROTTEN WOOD should be constantly in the pens, that the hogs when confined for fatting, may eat it at pleasure. Nature points out this absorbent, (or whatever it may be,) as a remedy, or preventive. They will leave their food to *devour* the rotten wood, when they require it. I have not lost a fatting hog for more than 30 years, when I used it, but have suffered by neglecting it. Some of my neighbors met with frequent losses of fatting hogs till I informed them of my practice; of which I was told by a woman from East Jersey, before our Revolutionary war. She said it was then known and practised there."

I add my experience since the foregoing was published; which has been uniformly similar.

In the 2d volume, page 32, near the close of a very valuable communication from Mr. *De Gruchy*, of Northumberland, in our state; who fattens great numbers of Swine, prepared at first with wash from a large distillery, and finally fatted with Indian corn; the following important information will be found. The whole communication is worthy the perusal of every farmer.

"*Dry Rotten Wood* is a good thing; but I will take the liberty to mention what I think a better; we have three blacksmiths in this town; and my hogs eat up all the *ashes* or *cinders* they make; we haul it into the pens by cart loads, and the hogs will, you observe by the *Rotten Wood*—*devour* this at times with more avidity than their ordinary food."

The *carbonated* cinders contain some of the ingredients of *rotten wood;* and perhaps in greater proportions. Be this as it may, every farmer can readily obtain the latter; and many can procure the former. It is anxiously desirable that a preventive so efficacious as either has been found to be, may not be unwisely and fatally overlooked and neglected. Nothing in human art is invariably infallible; but the experiment is so easy and cheap that the most incredulous should be induced to give it fair trial. Clean elevated sties or pens, dry litter and a small enclosure, adjacent to the pens, for air and exercise, and a moderate, but constant snpply of *salt*, no doubt add to the efficacy of the preventive.—The diseases I have seldom known to be cured. The most formidable of them are sudden, violent, and rapidly fatal, never allowing time for remedies. Their victims are unexpectedly (for gradual approaches are unperceived,) attacked with the last paroxysms, before their danger is decisively known.

Pigs and sheep are subject to sudden and incurable maladies.

Preventives are, therefore, of the first importance. Professed cures are, too often, mere quackeries in relation to both these estimable parts of our stock.

RICHARD PETERS.

ADVICE TO YOUNG FARMERS.

ON THE APPELATIVES, QUALITIES, HABITS AND DEFECTS OF HORSES.

(Concluded from No. 46, page 365, Vol. 5.)

Stifled, or lame in the *stifle*. The stifle is the knee pan of the thigh; the ligaments, by which it is articulated to the great bone of the hock, are sometimes overstretched, and the stifle-bone may be moved, in all directions, by the hand. The horse will go lame, and only touch the ground with his toe.

Bone spavins are, in the hind, what splents are in the fore-legs, but always of much worse consequence, because usually nearer the joint. They are to be felt on the inside of the hough, or hock. They are said to be hereditary, as well as acquired by strains, the signification of which perhaps, is, that a horse may be predisposed to them, by a natural moistness of constitution and laxity of the tendons. They occasion lameness, either perpetual, or at intervals; and as, nine times out of ten, this is the case, after a pretended cure, it is safest to hold them incurable. Spavins, by the pain they occasion, generally prevent a horse from getting flesh.

Bog spavins, termed by the French, *vessigons*, and improperly called blood-spavins by our farriers, are swellings like wind galls, situate in the hollow or inside of the hock, and may also be seen and felt, on each side, without. When these prevail to any great degree, or the inside of the hock feels puffed or flabby, instead of close, dry and elastic, it is the certain indication of hard service; and although it is often neglected, even by dealers, it is of the utmost consequence to examine the hocks minutely. We have the authority of Bracken, for their being safely curable, by excision, as well as windgalls, of which I entertain no doubt, although I have never experienced it. When they are large, they occasion lameness, particularly at intervals. I have seen heavy, overgrown, three year olds, although they had never been worked, troubled with bog-spavins.

A *cubb* is a spavin situated along the back part of the hock, just below the elbow, or extremity. It runs tapering downwards. After the curb has been extirpated by fire, I have usually seen the horse go lame.

Thorough pin. A tumour or wind-gall, between the bones of the hock behind, which may be pressed by the finger to either side.

Capped-hocks, formerly named by Blunderville, *hough-bony.* This is a swelling on the point of the hocks become callous. It is the general case of *kickers*, which wound their hocks, by striking against hard bodies.

Jardons are hard tumours upon the bending of the ham, on the outside. They arise, in managed horses, from their having been kept too much upon their haunches, and occasion lameness.

Sickle-hams, or sickle-houghs, in horses, may be compared to knock, or, nap-knees in men. The legs bend, the hocks approach each other, and the feet are thrown out. It is an indication of weakness, as is every other breach of proportion. Such horses, when young, are often lame in the hocks, and will cut themselves, notwithstanding they appear to go wide. They are reckoned speedy.

Sallenders are, behind, the same as mallenders before. *Rat-tails*, *scratches*, *crown-scab*, *grease*, &c. are all visible enough, or to be felt upon the shank, coronet, and pasterns.

What has been said of knocking before, applies exactly to *cutting* behind. Good shape and condition are a security against this. A saddle-horse ought to be frigate-built, sharp in the keel, and spreading behind, in the quarters; of course, he ought to go wide behind. When a wide-going horse cuts, it indicates weakness in the loins.

To go *hammer* and *pinchers*, is to overreach, and strike the hinder toe upon the fore heel; the wound thus occasioned was formerly called an attaint. A horse which throws his haunches well forward in action, may occasionally strike the heel of the fore shoes, and such frequently do it; but those which do it at every stroke, and discover it by the noise their shoes make, are very dangerous to ride; in fact, fit for nothing but draught. When the thigh is too long, and the angle formed by the hock too extensive, the horse is subject to spavins, from the too great weight thrown upon the hocks, also to over reach.

The *string halt*, called by the old farriers, the *mary-ninchcho*, every one knows to be a sudden and preternatural catching up one, or both the hinder legs in action. The cause, obviously proceeding from over contraction, no writer, that I know of, has attempted precisely to ascertain. All receipts for its cure are good waste paper. In horses which have it not in a very high degree, it is sometimes scarcely perceptible, but visible enough after a hard day's work. They should stand in a loose stable, and be as much abroad as possible. They are not deemed unsound. I have heard the late Mr. Tattersall say, he scarcely ever knew a string halted horse which was not a good one. As much is generally averred in favour of rat-tailed ones. Perhaps their whole tendinous system is tough, firm, and dry.

The *crib biter*, formerly called a *ticker*, is sometimes distinguished by his dead coat, and thin appearance. These horses will stand biting at the rack, or manger, or even at a post, throwing themselves backward, and sucking in the air with greediness. It is a habit acquired when they are young, and which never forsakes them; as I have known grown children, of thirty years of age, suck their tongues. Crib biters are apt to ruin their teeth. I know not why, but I think bred cattle most subject to it.

A variety of rules have been laid down to determine the seat of lameness in horses, few of which, I believe, to be infallible. Very little else is to be discovered by the old method of turning a horse, which is lame before, short round, than that you have increased his pain. Osmer says, if a horse drags his toe upon the ground, the ligaments of the shoulder are certainly strained, or perhaps even the scapula, or blade-bone dislocated, backward or forward. But strains of less consequence may happen to the shoulder, which are very difficult to distinguish from those seated in the lower extremities. In such case, I know of no other rule by which to judge of the soundness of the shoulders, than that which I have already noted in *Italics*, a few pages back. Both the hand and the eye should be sedulously employed, in the endeavour to form a correct judgment; the former much more than is usually the case. The pastern joint should be turned by the hand, in order to discover any lurking uneasiness. The patient himself, although unable to speak, will give very plain indications, in particular, by constantly attempting to favour the injured part. In strains of the *coffin joint*, or bone of the foot, the horse will stand with the toe only touching the ground. In a hot or *surbated* foot, he will be alternately changing, or lifting up his feet. If a foot be pricked, or gravelled, or if the shoe set hard upon the soal or heel, or in short, if the horse have any complaint against the smith, he will frequently shew it, by setting the injured foot upon the other. Going short, and catching up the feet, as if the horse was treading upon hot iron, also denotes uneasy shoes, or tender feet. Horses with cramped or contracted sinews, or hurt in the knee joints, as post hacks frequently are, will fall down suddenly in their walk. If a horse trot sideways, sometimes with one, sometimes with the other foot first, or if he perpetually tend to one side of the road, it shews universal stiffness from hard labour, and the want of a long run at grass Hurts in the loins are known by a rolling or wavering motion of the hind quarters. In a sudden jerk or strain of the loins, the horse will seem to go, as it were, whole, and fixed behind, and upon his heels, as if foot foundered Horses are not so often lamed in the back sinews, behind, as before; but I have known several cases of the tendon of the hind leg being suddenly let down, and in the course of two or three weeks, by the help of bandage and astringents, braced again and placed in *statû quo*. The symptoms were, lameness, and dropping suddenly at intervals; inflammation and tension; after these had subsided, a palpable laxity, and softness of the tendon.

The flying lameness, as they are styled, in the shoulders, and lower joints of young, or unseasoned horses, it is the custom of farriers to attribute to peccant humours. I must boldly avow my scepticism on this head, although Gibson and Bartlet be of the opposite party. They might just as well, in general, I conceive, lay these griefs to the charge of the lunar influence. They are often nothing more than the consequence of sudden and unusual exertion upon young and tender fibres, or those unaccustomed to stress and action. I know that copious bleeding and purging, much to the credit and emolument of the groom or farrier, are usually prescribed, and with success; but I have also repeatedly seen a loose stable, or a fortnight's run abroad, succeed full as well. So much for *humours which fly about a horse;* they much oftener fly about the brain of his keeper. Horses are, in truth, sometimes subject to rheumatic pains, and the *sciatica*, or hip gout.

It is the opinion of many, that there is no necessity for great substance in the shank and pastern, provided the sinew be large and distinct, and the loin wide and good; in which, it is insisted, the chief strength of the horse resides. Baret and Osmer are of this opinion; but I think it scarcely correct, since an equal distribution of substance is obviously as necessary, as of length. Osmer, no doubt, intended to speak comparatively between the different species, and it is certain, that the southern bred horse, with his small hard shank, and large, dry, and tough sinew, is able to move with a much larger proportional weight, than the thick gross horse of these northern countries. Nevertheless, to be able to carry weight, a large sinew should be attached to a shank, and joints proportionally large; and the whole supported by a foot of compass sufficient to form a steady foundation. It is the result of my constant observation, that hacks, with large bone under the knee, will always endure most rattling over the hard road.

Horses formed too bulky upwards, for their lower extremities, are liable to various accidental lameness and defects, merely from the unequal pressure of their own weight. Hence windgalls, splents, spavins, and particularly crookedness of the joints. These, and all early-grown cattle, should be put to work very late, in which case they will improve; otherwise will seldom stand sound long. It is a mathematical truth, that a crooked joint cannot be so strong as a straight one, as a column is strong, in proportion as it is perpendicular.

There is a certain reason why St. Bel did wrong in not quoting Osmer by name. In one case, he has very properly corrected him. Osmer, though an excellent writer, was a little too positive. He offers a method of shoeing, or paring one side of the foot of a colt, which is infallibly to prevent his ever turning out his toes. But he erred in supposing the defect to be the mere consequence of early habit, since it is no doubt almost ever the result of natural conformation, and his proposed remedy might be attended with dangerous consequences. He, perhaps, received the opinion of the Stagyrite too literally, "that Nature never errs," which if predicted of her original determinations, is unquestionable; but if of spontaneous and fortuitous action, is contradicted by every day's experience.

It is a very just observation, that a horse "can scarcely go too wide behind," and, that he ought to be very wide across the knee, forearm, thigh, and hock. But I have, as well as Bracken, seen now and then one which exceeded in those particulars, and which were inapt for action in consequence, but robust and hard feeders. A horse must obviously lose strength, if the hinder legs be too far extended, and I have thence seen that wavering of the croup, noted by St. Bel, in both saddle and draft horses. Two extensive quarters press too much upon the fore-parts, and occasion the horse to overreach. I know not whether it has been hitherto remarked, that a horse going wide behind, appears to an unskilled observer, to be lame of that hind-leg, upon which his eye is fixed, notwithstanding it be perfectly sound; but so it certainly is.

The health and condition of animals is ascertained by the gloss, sleekness, and evenness of the coat. If the horse's hair stare, or stick out, and look dead, he is diseased, or ill fed. If nits appear upon the extremity of the hairs, he has been lately at grass.

The signs of vice and ill nature in horses, must be sought in the eyes and countenance. A vicious horse, when he lays his ears and looks back, exposes the whites of his eyes, and his malicious intentions are very visibly painted in his countenance. He stands commonly with his neck fixed, as if prepared for offence. Care should be taken to discriminate. The best natured horses will, on the approach of man, lay their ears, smile, for they are most truly risible animals, and move their necks to and fro, in a wanton and playful manner. There is an expression of nobleness and generosity beaming from the eye of a good, and well tempered horse; and it is grievous, often to see the friendly advances of this excellent, this next to human creature, treated with surly indifference, or cruel stripes.

Jockies say, "a horse should carry his head in a proper place, when mounted;" how is that? So that his chin, or under jaw, recline somewhat under his windpipe, and his neck and head form a portion of a circle. But this relates only to a slow pace.

In the purchase of a horse, with the usual warrant, we will suppose, the buyer ought to attend first of all to the most important considerations, in which being satisfied, it is vain to hesitate, since as the case stands, he may not meet that satisfaction every day. These, I think, are—age, ability to carry his weight, safe going and good feet; freedom from knocking, cutting, or overreaching: that there be no need of martingale, or crupper; speed.

What has been already said of form and blood, the reader will find as strictly applicable, in general, to the hunter as the hackney; but the former not being required to trot, or to go much over hard roads, are additional arguments in favour of thorough blood. Nor can it be doubted, that a bred horse, if not too high upon the leg, from the cleanness of his make and the strength of his sinews, is the fittest to carry twenty stone, over the deepest and most inclosed country.

I have observed, that the Irish hunters are the highest leapers in the world, from their being early trained thereto. Would it not be advantageous, to bring all our colts of size and figure to the bar? Good standing-leapers are, I think, generally scarce: and some, which are good in that respect, will hesitate and boggle at their flying leaps. Perhaps an early attention might remedy those defects.

FROM THE NEW ENGLAND FARMER.

SIR,—In this age of improvement, as it is justly called, I wonder no person has invented a suitable press for extracting the juice of currants. It has become very fashionable to make currant wine; and it is an *excellent*, and *cheap* substitute for *any* imported wines, but the want of a press is much felt It appears to me that the man who shall invent a cheap press, will find a great demand for the article. A FARMER.

SYLVA FLORIFERA.

ACACIA.—ROBINIA PSEUDACACIA.

Natural order, Papilionaceæ, or Leguminosæ. A genus of the Diadelphia Decandria class.

"Light-leaved acacias, and the shady plain,
And spreading cedar, grace the woodland reign."
BARBAULD.

Although we are far from being amongst the number,

"Whose proud disgust and scorn
Detest those treasures which at home are born;
Who feel no joy, though spreading to the air
His pompous trees their verdant branches rear,
Unless from Afric's soil their rise they boast,
From India's deserts, or Columbia's coast.
* * * * * *
But if some foreign tree, of noble size,
With boughs majestic should adorn the skies,
Our forest natives with attention meet,
And hospitable care the stranger greet;
Pleas'd 'mongst themselves his future dwelling make,
Not for his scarceness, but his beauty's sake:
If haply profit too should join with grace,
To civic honours they admit his race."
DELILLE.

Of all the exotic trees with which we have adorned our native groves, this North American stands first. We have no tree that displays more elegant foliage than is formed by it's pinnated leaves, which appear so judiciously scattered over the branches that not one obscures it's fellow, and their feathery lightness is only surpassed by the pleasing emerald tints with which they are coloured, nor are it's bunches of pendant papilionaceous blossoms less acceptable for succeeding the more gaudy laburnum, and thus lengthening the charms of spring. The sweet perfume with which they scent the surrounding air only makes us regret their short duration; but to these succeed pods of so rich an umber brown, that autumn seems to peep through the veil of spring, and repay us for the loss of its orange-flower odour; whilst the nightingale loves to confide her nest to this new inhabitant of our climate, whose long and strong thorns seem to insure her family a protection, and she descends to the lower branches to ravish our ears with her sweet melody.

"Nor rural sights alone, but rural sounds
Exhilarate the spirits, and restore
The tone of languid nature."
COWPER.

We cannot with indifference behold this tree which the uncivilized natives of America have consecrated to the genius of chaste love. These proud children of the desert are not less susceptible of the pangs which cupid occasions, than the more polished inhabitants of Europe; nor are they less delicate in expressing their sentiments, which, instead of flattering words are told by a branch of acacia in blossom. It is natural to suppose that this seducing language is as well understood by the young savage of the forest as by the tutored coquette of the city.

The introduction of American plants into Europe made a change in the system of botany absolutely necessary; for that which had been arranged by Tournefort and others, was found impossible to be applied to the plants of the new world. This tree, when first introduced, was supposed to be a species of the acacia known in the ancient world, because its thorny branches and winged leaves bore resemblance to the Egyptian thorn, or binding bean-tree, which the Greeks called Ακακια, of ακαζω, to sharpen, from whence the Latin *acacia* But by the system of Linnæus we discover that it cannot be ranged in the same class or order as the true acacia.

It is therefore commonly called the false acacia, while, in America, it is named the locust-tree.* We have now collected thirteen different species of this tree, all of which bear the generic name of *Robinia.*

Europe owes this vegetable beauty to Monsieur Jean Robin, nurseryman to the king of France, and author of a "History of Plants," who first brought the seeds from Canada; and, in gratitude for the gift, botanists have given it the name of Robinia.† Soon after it's introduction into France, the English gardeners received seeds from Virginia, from which many trees were raised. Parkinson observes in his Theatre of Plants, which was published in 1640, that "it was grown of an exceeding height, by Mr. Tradescant;" and Evelyn recommends it to the nation in his Sylva, which was presented to the Royal Society in 1662. In this work, he says, "The acacia deserves a place among our avenue trees, adorning our walks with their exotic leaves and sweet flowers; very hardy against the pinching winter; but not so proof against it's blustering winds." This great man, who so eminently displayed his desire to embellish and enrich his native country, by plantations, adds, "I would encourage all imaginable industry in such as travel foreign countries, and especially gentlemen who have concerns in our American plantations, to promote the culture of such plants and trees, especially timber, as may yet add to those we find already agreeable to our climate."

These observations appear to have met with little attention, as the tree seems to have been rare in 1720, when Bradley notices it as growing in the court before Russel House, Bloomsbury, and in the Old Palace yard, Westminster. In both of these situations their roots have given place to flag stones, brick and mortar; their trunks to lamp posts, and their waving branches to clouds of coal smoke. Mortimer says, "a great number of them were formerly planted in St. James's Park, and that in consequence of some of their branches being broken by the wind, they were all cut down."

This graceful tree is to be found in every well planted shrubbery, yet it meets the eye less frequently than could be wished by the admirers of beautiful scenery, while in France it not only ornaments the gardens, and shades the public promenades, but it's winged leaves shine through their woods and forests, so as to give an idea of it's being a native of the soil. There it adds utility to luxury, and profit to beauty, for the turner finds the wood both hard and firm, while the joiner uses it for durability, and the cabinet-maker for the beauty of it's yellow and brown veins; nor must we forget a singular quality in this tree, which is, that it burns well even on the day that it is felled; a property of no small importance to a country where wood continues to be the only fuel. This tree grows from fifty to seventy feet in height, and so rapidly when young, that it is not uncommon to see shoots of this tree six or eight feet long in one summer. In New England, we are told of a Robinia tree, of forty years old, that was in 1782 sixty feet high and four feet ten inches in girth, at three feet from the ground. This timber has been employed with success in Virginia for ship-building, and found to be far superior to American oak, elm, or ash, for that purpose; it is even said to be as durable as the best white oak, and esteemed preferable for axletrees of carriages, trenails for ships, &c. Most of the houses which were built at Boston in New England, on the first settling of the English, were constructed of this timber. The native Americans make their bows of this wood, and point their arrows with one of it's thorns. It's tap-root, when cleared of the bark, has an agreeable perfume.

We are told, in Martin's edition of Miller, that Sir George Saville had, in 1807, planted many thousands of these trees at Rufford; and we feel confident that they will ultimately benefit his estate, notwithstanding the character given them by most English writers, that their branches are subject to be broken by the winds in summer. We have seen them so shattered in situations injudiciously chosen, while on the banks of the Thames, and in other sheltered spots, we have remarked them of more considerable age and magnitude than even in France.

The Acacia Robinia seems particularly adapted to ornament the modern villa; it's light and loose foliage, that pleasingly admits the light, seems to harmonise better with the trellis work of the viranda than any other flowering tree, while the grace of it's bend, and the gaiety of it's head, correspond with the nicety and cheerfulness of this style of building, which has of late years so greatly embellished our country. Nothing, perhaps, displays more conspicuously than this the liberty of the people, and the equity of the laws that protect the lone cottage, more securely than any ramparts or moats could have protected our forefathers, who found no security but in their castles, or the walled towns, where their reliance was on their numbers. These towns were called *Villæ*,* and from whence we have derived the name of villa for detached country dwellings; and as long as our liberties and laws remain unimpaired, so long will the acacia wave it's banners in security over our peaceable villas.

In placing this tree in the shrubbery or plantation, a sheltered situation should be chosen. It is a beautiful tree, either to look through, or to look down upon, and it is equally ornamental when it feathers to the ground, or carries it's plumage above evergreen shrubs, which it's shade injures less than that of other trees, and it is certainly less hurtful by it's drip than any tree we know of. This may be accounted for from a singularity in the nature of it's pinnated leaves: they fold over and join their upper surfaces in bad weather, leaving the tree, as it were, stripped of half it's foliage, while the rain is conducted by the branches to the trunk, and from the trunk conveyed to the root. These winged leaves expand themselves again in fine weather to exhale oxygen gas, but at the approach of night they again close their leaves, as if to sleep, and are thought to give out carbonic acid from their under surface. An infant, who had observed this natural phenomenon from it's nursery window, observed, "it was not bedtime, for the acacia tree had not begun its prayers;"

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* *A name which most probably was given to it by some of the early missionaries, who would wish to create a belief that it was the same tree the fruit of which supported St. John when in the wilderness.*

† *Gerard received the nasturtium seed from M. J. Robin.*

* *The Latin word* Civitas, *properly, is referred to the people and inhabitants who live under one, not only one law, but also under one and the selfsame magistrate and government.* Urbs, Villa, *and* Oppidum, *signify the place wherein those citizens live and assemble themselves.* Tate on the Antiquity, &c. of Cities, Boroughs, and Towns, 1598.

> "Thus every object of creation,
> Can furnish hints to contemplation;
> And from the most minute and mean,
> A virtuous mind can morals glean."
>
> GAY.

The Robinia, or, false acacia, is not delicate as to soil, for it will grow in earth of every kind, but prospers best in such as is light and sandy. The finest trees are those raised from seed, which should be sown in light earth, about the end of March, and in about six weeks the young plants will appear; they-may be transplanted the following year, for all trees that have a tap-root it is advisable to transplant young. This tree is also propagated by suckers and cuttings; but these seldom prove so handsome as those raised from seed.

We do not learn that this tree has in any shape added to the catalogue of medicines. The *Acacia* of the shops was formerly made of the unripe pods of the true acacia tree; but of later years, the *Acacia, Germanica*, which is made from unripe sloes, is preferred as an astringent medicine to the true acacia.

TO THE EDITOR OF THE AMERICAN FARMER.

HYDROPHOBIA—SEVERAL INSTANCES OF, WITH ACCOMPANYING SYMPTOMS.

Brandywine, January 25, 1824.

MY ESTEEMED FRIEND,

Seeing an account of a singular instance of hydrophobia in the last number of the American Farmer, noted by a Virginian of Jefferson county, Va. stating several circumstances, which may appear novel in that disease, to many that have not been eye witnesses to facts. But from my frequent opportunities of seeing cases immediately under my notice, can attest the same disposition in a cow of mine, that is related by him.

I had a cow bitten by a small sized dog, that was suspected from his behaviour, to be infected with hydrophobia, but after his biting the cow and several other of my domestic animals, I thought best to secure him to ascertain the fact by keeping him confined, until time should reveal the truth of the case.

One of my neighbors had called on me to know if such a dog had been seen, describing him; I found he had bitten several animals, before he arrived at my house; he had been about with my boys who had caressed him for his activity, and boldness to attack any thing that came in his way; the attack of my young bull dog, was one of his first acts of valour, about twice the size of himself; my hogs, and even a horse he took by the nose; all those circumstances happened in the early part of the day, when I was absent; as soon as my neighbor informed me of his behavior, before he came to my place, I took the alarm, and was very desirous to secure him for proof of his infection.

I ordered an open hogshead to be got ready while I went in search of him, I found him laying in the entry of my stable, where he had been with the boys that had been feeding the horses some time before, and coiled up as if asleep—I opened the door and spoke, he looked up without rising—the moment I saw his eyes with that green *glistening* appearance, I was confirmed in the belief, of the certainty of his case of infection, and remarked to my neighbour, who was with me, that he was surely mad. I took a small cord and a club, and cautiously approached him, speaking to him in a soothing tone till I fastened my cord about his neck, and led him out; the hogshead not being yet ready, he began to snap the rope that I held him by, until his sharp teeth cut it off; ran toward the house and took shelter under an oven where I could not so readily come at him; I procured a piece of meat, showed it to him; called him and threw it on the ground, he readily came out, and began to eat what I gave him; I caught him by the back of the neck so effectually, as to ensure safety, and carried him to the hogshead, and covered it with heavy plank, with such weight as to ensure his safe keeping.—From that moment, he seemed distracted with all the symptoms of dreadful hydrophobia, gnawing frequently at the bonghole of the hogshead violently—and by putting a stick in at the hole, he would snap it, with all the symptoms that accompany that disease— he was dead next morning in his confinement.

The cow that was bitten, (although I could not discover any wound,) was milked as usual, not used in the family, but fed to a calf then raising, until the subject had become less alarming, and the milk of that cow was put with others for family use—about two months had elapsed when she was milked in the morning as usual, for family use, and went for that purpose.

But while the cattle were yet in the yard she was discovered to ride on some of the others, as if wanting a bull; she was driven immediately to the next neighbor, who kept one, but in a few hours he sent in haste a messenger to have the cow taken away, as she was "mad;" I hastened to relieve him of his anxiety, for the safety of his large stock. She was so agitated and in such a paroxysm of rage, as to run into thickets and precipices, as no animal in their common senses and habits would attempt, and induced us to put an end to her misery on sight.* My young bull dog was timely put out of harm's way, my hogs were suffered to remain, and about nine or ten days after being bitten, they took the infection and died, my horse was bitten in the side of his upper lip, a soft fleshy part. I thought of an experiment several days after it happened—he had been at work, when he came home, one evening I took a penknife and by careful amputation removed all the wounded part, and he never was infected.

I have been the more tedious in giving a relation to shew the little incidents that often lead to discoveries of importance; there is one other, that may shew us the errors that we establish as facts without a sufficient ground, that is, the dread of water, *in all cases*—it was not the case with this dog—my boys were in a boat on the milldam, when they first saw him as if hunting along shore, they called him, and although strangers to him, he jumped into the water, and swam perhaps fifty yards to them, and they helped him into the boat.

I happened to pass that way on shore, and saw the dog, enquired how he came there, they informed me; he was then standing with his fore-feet on the gunwale looking at me, and as they afterwards said had been gnawing the side of the boat at intervals, while in that position.

I knew another instance of a dog passing my mill after night, who bit a female of his own kind as he passed, that was standing at the door; hearing her cry out, as if bitten by a dog, struck me with an idea of his madness, because if free from that disorder, no such violence would take place from the male to a female.

We examined in the morning, (as it was night when it happened,) and found a track of large size had entered the fording of the creek, below the mill, and gone over through the water; strict search was made, and a wound was found on the head of the slut, which was fatal to her in about 9 or 10 days—she was kept confined to witness the event—the dog had crossed the water 80 or 100 yards wide.

Those two instances shews a voluntary entering the water, although it may not be generally the disposition of all infected with that malady.

A "mad dog" and an angry dog are very different, the former will fly from you if pursued, and seems timid and suspicious of danger, the latter I need not describe. I am ready to conclude, that cutting the infected part away, any time within *eight days*, is the surest cure that can be made use of.

I never knew an instance of *earlier* infection; but from that period to seven months, I have known frequent instances of the effects being fatal to the subject. We find it confined to the place where the virus is deposited *at least eight or nine days*, and as I have been ready to believe as much longer, as no symptoms of hydrophobia appear—therefore, the skilful application of the knife to flesh wounds, might be looked upon a sure remedy. But many instances would require the best skill of practical surgeon, when the wound is made amongst the more vital parts of the system.

C. KIRK.

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* *I have lost several cattle by hydrophobia.*

TO THE EDITOR OF THE AMERICAN FARMER.

TURNIPS.

Pittsfield, (Mass.) January, 20th, 1824.

SIR,

Some months ago, I was induced to write you a communication on the subject of *turnips*, in consequence of an article of one of your correspondents, tending to discourage the cultivation of them—and as I then promised to give you the result of this year's crop, I avail myself of a little leisure, to redeem my pledge.

According to the weather, I have for six years practised sowing turnips, from the 15th to the 25th June. But this year, a severe drought through the whole of June, and until the fore part of July, obliged me to delay it until the 10th—(too late by 15 days, at least, to warrant the hope of a crop of *ruta baga*.) The land (gravel) had been previously manured, at the rate of 20 ox cart loads to the acre. Immediately after sowing and rolling, gave the drills a top dressing of 12 bushels of slacked ashes per acre. They were ploughed, and hoed out, twice. On the 10th of November, began to harvest them—and had at least 450 bushels to the acre, estimating an ox cart at 30 bushels.

The expense of cultivation, and harvesting, does not exceed that of corn—of which the average crops of the country may be stated at 25 bushels. The corn I raised this year, was manured in the same manner as the turnips, and we had about 50 bushels to the acre. In my estimation, six bushels ruta baga, are equal to a bushel of corn, for any kind of live stock.

It is objected by some, that it is a troublesome crop to secure through our long, and severe winters;—It is not more so, however, than potatoes, and the value of them for stock, especially sheep, at the close of winter, and until grass will afford a good bite, (which is not generally until the 10th of May) can only be duly appreciated by experience.

It is doubtful in my mind, if the cultivation of turnips will answer to any extent, so far south as Maryland; but for the eastern and western states, it must, methinks, as we progress in agricultural impprovements, become an important item in the rotation system of every good farmer, who combines arable and grass farming.

I have long been of opinion, that we might cultivate *rape* to advantage, in this section of our state, (at least for sheep,) being ignorant of the best mode of cultivating it, its proper soil, and the manner of curing and securing it, if raised for the seed. I beg leave to ask of you to appropriate a place in your valuable paper, to an article on the subject, in the belief that it would be interesting to this vicinity.

AGRICOLA.

◆

AMERICAN IRON.

Baltimore County, Feb. 1st, 1824.

MR. SKINNER,

Sir—In your last number, you give an account of a manufactory in the city of New Jersey, for converting iron into steel, which is found to be of excellent quality, and you say, "we do not "yet manufacture iron as it ought to be manu- "factured, but we trust we soon shall."*

My present object is to ask wherein we are defective in making iron; for if this is pointed out, perhaps a remedy may be applied, at least, an attempt shall be made by one that is interested.

SOHO.

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* The remark was not made by the Editor of the Farmer—if this should meet the eye of its author, he will probably answer the enquiry. *Edit. Am. Far.*

◆

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Tracy's Landing Warehouse, commencing on the third day of October, eighteen hundred and twenty-three, and ending on the third day of January, eighteen hundred and twenty-four.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	62			62
Number delivered.	42			42

JOHN H. TILLARD, Inspector.

TREASURY OFFICE, ANNAPOLIS, Jan. 30, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 13, 1824.

☞ The first meeting of the Trustees of the Maryland Agricultural Society for the Eastern Shore was held at St. Aubins, the seat of Nicholas Hammond, Esq. on Thursday last the 29th Jan. Owing to several members of the Board being absent, upon public business, and to the circumstance of others being unfortunately detained by the indisposition of their families, a single member was wanting to constitute a majority, which by the rules of the association is necessary to transact the business. The company however spent a most agreeable and useful day, engaging themselves in conversations on agricultural matters, and in the interchange of opinions, intelligence and suggestions upon husbandry and its kindred concerns.

The attention of the company was drawn to Mr. Hammond's fine stock of different kinds, which were very beautiful, and did great credit to the management and care bestowed upon them—to his enclosures, which are neat and durable—and to his grounds which are in an admirable state of culture, and exemplify this important maxim in agriculture, that a small piece of ground well manured and cultivated, will yield three or four times the quantity of product, with half the expense and labour, that double the quantity of land now gives under the common mode of cultivation. The farm yard and buildings at St. Aubins are particularly worthy of the attention of agricultural gentlemen, as they constitute an establishment far superior to any thing of the kind that any of the company ever witnessed in Maryland.

After the most hospitable entertainment, the Board adjourned to meet at Mr. Samuel T. Kennard's, in the next month.—*Easton Gazette.*

◆

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Wharf flour, $5 37½—Howard street, do. $5 62½—Best family do. retail, $7—Wheat, red, $1 10—Corn, 35 cts.—Rye, 40 cts.—Oats, 28 to 30 cts.—Whiskey, 23 to 26—Butter, inspected, 10 to 15 cts—Coal, Liverpool, bushel 40 to 45 cts.—Virginia, 28 cts.—Susquehannah, per ton $6 50 to $7—Rice, per cwt. $3 75 to $4—Beef, northern mess, per barrel $10—Cargo, No. 1, $8 to 8 50—do. No. 2, $6—Baltimore prime, $10—Bacon and hams, 10 to 11 cts.—Cotton, W. I. Island, 18 to 20 cts.—Louisiana, &c. 16 to 17 cts.—Georgia upland, 14 to 16 cts.—Alabama, 12 to 13 cts.—Candles, mould, 12 to 13 cts.—Dipt, 10 to 11 cts.—Spermaciti, 25—Feathers, live, 30 to 35 cts.—Fish, herrings, Susquehanna, $2 75—Fall mackarel, No. 1, to 3, $4 50 to $7—Shad, trimmed, $6 to 6 50—Flax seed, rough, per bushel, 70 to 75 cts.—cleaned, cask, $8—Flax, per lb. 10 to 11 cts.—Hemp, Russia, $175 ton,—Country dew rot, 7 cts. per lb.—do. water rot, 9 cts.—Hops, fresh, 35 cts. per lb.—Hides, dryed, 15 to 19 cts. per lb.—Hog's lard, 12 cts. per lb.—Lime, per bushel, 30 to 33 cts—Leather, soal, best, 24 to 27 cts. per lb.—do. Eastern tan, 18 to 20 cts.—Lumber, board measurment, cargo prices:—Of the following articles we give the yard prices.—Oak timber and scant. $1 to 1 25—Boards all sizes, $1 50 to 2—Pine scantling, do. $1 to 1 25—Boards 4-4, $1 to 1 25—White do. 5-4, $1 75 to 2 50—do. co. 4-4, $1 15 to 1 30—do. cl. 4-4, $1 80—Shingles, cyp. 18 in.—$3 to 3 50—Shingles, junip. 24 do. $7 50 to 7 75—jun. com. $3 50 to 5—Staves, W. O. pipe, $40 to 45—do. hhd. $25—do bbl. $15 to 17—R. O. bbl. $15—do. hhd. $17—Wool, fleece, merino full blood, 35 to 40 cts. per lb.—Cropped, 28 to 30 cts.—Common country, 20 to 30 cts.—Skinner, 35 to 40 cts.—When assorted and cleaned, any of the above will obtain an advance of 15 to 20 cts.

Retail prices of provision market—Beef, prime pieces, 10 cts.—Veal, 8 cts.—Mutton, 6 to 7 cts.—Turkeys, 75 cts. to 1 25—Geese, 50 to 75 cts.—Ducks, Canvasbacks, $1 25 to 2—Red heads, 75 cts. to $1—Chickens per pair, 50 to 62½ cts.—Eggs, 15 to 18 cts.—Butter, 1st quality, 25 to 37½ cts.—Turnips, per bushel, 50 cts.—Potatoes, do. 50 cts.—Parsnips, do. 62½ cts.—Celery, 8 to 10 cts.—Carrots, 4 to 6 cts.—Cabbages, 2 cts. &c. &c.

Prices of Robert Sinclair's, Wood's and Carey Ploughs.—No. 3. Woods' or Freeborns' $11—No. 2, do. do. $10—No. 1½, do. do $8—No. 1A, do. do. $6 50—Corn, do. do. $6—No. 21, do. do. for seeding, $5, (Extra shares always on hand, at 37½ to 50 cts.) No. 3, Carey or Dagen, $6—No. 2, do. do. $5 50—No. 1, do. do. $5.

Premium and other barshare ploughs, is 10 per cent. lower than last year.

Liverpool Market, December 16.

Tobacco.—There has been a good demand for leaf, partly on speculation, and partly for the Irish market, viz. 180 hhds. Kentucky, on the former account, and 100 Virginia for the latter, chiefly at previous rates. The sales of stemmed to the trade do not exceed 60 hhds. at the quotations.

Naval Stores.—Rough Turpentine experiences a very steady demand from the trade, and prices remain quite stationary. About 3000 bls. were brought forward by auction last week, none of which was of fine quality, and some ordinary, which operated against the sales; in consequence only 1340 bls. were disposed of at 12*s* 6*d* to 13*s* 9*d* per cwt. the best not exceeding 2-3ds soft.—The transactions in *Tar* consist of 580 bbls. of Carolina from the Quay at 13*s* 3*d* to 13*s* 6*d* per barrel.

ROBERT SINCLAIR,
Ellicott street, Pratt-street wharf, head of the Basin, Baltimore,

Has for sale, a good supply of *red and white clover, orchard grass, herds, timothy and lucern seeds, northern naked barley, spring rye, Albany pees, seed oats,* 300 bushels early white potatoes from his farm, 200 bushels millet seed, 50 bushels of hominy bush beans, or true Cockstone, 120 lbs. mangel wurtzel, of the growth of last year.

GARDEN SEEDS—he has now on hand a very general assortment of the growth of 1823, and has made arrangements to keep up fresh supplies from the Shakers in New England, and from one of the most respectable seedsmen in London, from whom he has, and expects supplies—so that *farmers and gardeners* may depend on the quality of the seed they may get from this establishment as being *fresh, true, and of the most approved kinds*—none will be sold by him that is at all doubtful in any respect—he has raised many kinds with great care, and will thus continue to supply himself with many sorts.

In store, a general assortment of *farming and gardening tools*; and as usual, an excellent assortment of implements of various sorts, amongst which are, 300 of the *premium and other bar share* ploughs—Also Woods' pattern, with extra shares to repair them, of No. 21, corn, No. 1 A, 1½, 2, 3. Also, the Carey ploughs assorted sizes, from No. 1 to No. 5, about 200 of the last two kinds, with cultivators, wheat fans, corn shellers, seives, straw cutters and cultivators, &c. &c. all at reduced prices.

CONTENTS OF THIS NUMBER.

POLITICAL ECONOMY, letter 2—VIRGINIA AGRICULTURAL SHOW, Report of the committee appointed to prepare for publication an account of the second Fredericksburg Agricultural Show and Fair—FATTING SWINE—ADVICE TO YOUNG FARMERS, on the appellatives, qualities, habits and defects of horses—PRESS for extracting the juice of currants—SYLVA FLORIFERA. *Acacia. Robina pseudacacia.* Natural order, Papilionosœ, or Leguminosœ. A genus of the Diadelphia Decandria class.—HYDROPHOBIA, several instances of, with accompanying symptoms—TURNIPS—American iron—Tobacco report—A meeting of the Trustees of the Maryland Agricultural Society at Easton—Prices current, Advertisement, &c. &c.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

Political Economy.

TO THE EDITOR OF THE AMERICAN FARMER.

LETTER III—AND LAST.

Dear Sir,

Having demonstrated, as I fully believe, that the man set up by the manufacturers of the present day, as the great apostle of their peculiar doctrines, never uttered a sentence in any of those writings, upon which they chiefly rely, that could bear, if fairly interpreted, any such construction as they are pleased to give them, I will recur once more to the common sense reasoning upon this subject.

And here I beseech all those who are most concerned, to keep constantly in view, the very wide difference which has always been discernable from the very commencement of every government, however free, that ever existed, between the real objects of those who *made*, and those who *carried into practice*, the constitutions thereof. The first, ever aim to limit and restrain, while the last, (call them whigs, tories, federalists, republicans, or what else you please,) are continually buying their inventions, to enlarge and to extend beyond their legitimate bounds, the powers which are to be exercised.—This results inevitably from the very nature of man himself; nor can it be otherwise, unless some effectual means could be devised, either to eradicate from the human heart, all pride, arrogance, avarice, and ambition; or so to control them, that like weeds in a garden, they could be cut up, as fast as they appeared. The history of every year's legislation, since our government was organised, will most clearly show this fact; for it is confidently believed, that not one can be named, let the administration have been what it may, wherein several attempts to usurp power, (some of them successful too,) may not be pointed out, of so glaring a character, that neither party spirit, nor the most charitable interpretation of motive, can explain them away. The only possible way in which this usurpation can be made, under a constitution like ours, is by exercising, what are called *incidental and implied powers*, rather than those which are direct and positive. This has constantly been done by all parties, wherever it suited their purpose, if the powers of the latter description appeared to forbid what they wished to do. What they were unable to find, "totidem verbis," they have spelt out "totidem litteris;" disregarding entirely, the obvious and incontrovertible truth, that no deduction nor implication can be legitimate, which contradicts the plain and positive provisions of the instrument, from which it purports to be drawn. Even on the supposition, that our constitution-makers had been too niggardly or destitute of foresight, to bestow a quantum sufficit of power, for all necessary and useful purposes, a forced construction, and application of what they really have given, is not the remedy for their failure. But the fact, I believe, is, that these wise and cautious men, being fully aware of the constant hankering after unlawful things, which beset a great majority of mankind, have been too strict for modern appetites, in guarding against all those abuses of power, to which they know, that all public functionaries are so incurably prone. Not that ours are worse than other men. But how, in the name of common sense, can we see any possible reason for their being so much better, as to be exempt from a universal inferiority. If the unvarying history of the whole human race, exhibits but one uniform scene of contention between the governors, and the governed, to extort on the one hand, or to extend; and on the other, to whithhold or to restrain power; what imaginable right have we to believe that *the men of our day*, will differ in this respect, from those who have preceded them?

I have made these general remarks, with a view to apply them to the particular case of the proposed tariff. When our constitution was first formed, it was known to all, that there were many and great conflicting interests to reconcile. These principally resulted from the circumstance, that some of the states were, and ever would be essentially agricultural; while others were, and must forever remain, essentially manufacturing. From this state of things it was manifest, that should either obtain the ascendancy in the great councils of the nation, there would be great danger of the others being oppressed; unless effectual means were taken to guard against it. Among the most obvious of these means, was the positive, unconditional prohibition of taxes upon exports; as any such tax, must necessarily have operated, for many years at least, exclusively against the agricultural states. Could it have entered into the imaginations of the members of the general convention, that precisely the same injustice might be perpetrated by taxes upon *imports*, if extended beyond the object of public revenue; can it possibly be believed, that they would have failed to impose such positive restrictions on this last power also, as to prevent the practicability of its being so exercised, as entirely to defeat the positive prohibition of the first? I may safely answer, that such belief *is impossible*, to any man not actually mad, or so far devoured by self interest, as to be incapable of seeing any side of a question but his own.

The reason why any tax upon *exports* was forbid, was so entirely plain, that it surely would have been surplusage in the extreme, not only to have enumerated every object of legitimate taxation; but also to have added, that none of them should be so taxed, as to draw from one portion of the union, a greater sum in proportion to its wealth and population, than from another. If this remark be correct, it follows most conclusively, that when our legislators are about to impose any tax whatever, even where the abstract right is unquestionable, it may become both inexpedient and unconstitutional, if it contravene the reason which produced the prohibition of taxes upon exports. If it is to operate with very unnecessary, and easily avoidable inequality, on the different parts of the United States, then are they bound by every principle of common sense, common justice, and duty to consider it as much forbidden, as if the constitution had said, "*this thing thou shalt not do, under pain of political damnation.*"

Shall I be required at this time of day to prove, that such a tax upon *imports*, as the new tariff bill proposes, will have the same unequal operation with a tax upon *exports*, confined to particular states, and particular articles, made alone in those States? Take a single case, (for one is as good as a thousand,) to demonstrate the fact to the understanding even of a child.

Suppose that I am under the necessity, or believe myself so, (which amounts to the same thing,) of buying a yard of coarse woollen, which I can get for 50 cents. Some man goes to Congress and says, I wish to manufacture the same article, but cannot do it, unless you require, that all purchasers shall give 75 cents for such an article, instead of 50. His request is granted; *his* manufacture either entirely excludes what I had formerly bought, or so nearly does it, that I am obliged to purchase of him, and to give 25 cents more than I formerly gave, or go without. It will hardly be necessary, I presume, to add, that unless *he* was to pocket this additional sum, he would not ask Congress to impose it, as it would be wantonly to injure me without benefitting himself. Nor need I take the trouble to prove, that although he may consume some of the same article himself, it does not cost him so much by all the profit of his labour, as well as by the additional duty of 25 cents, as it costs me, who do not make it. Now if this is not unequal, partial, and unjust taxation, I know not what is. But this is not all, nor half the outrageous grievance. The man from whom I bought before, lived in some other country, no matter where. But I avoid naming any particular one, because there are many men among us, so exceedingly nervous and sensitive as to be utterly incapable of viewing in the abstract, this subject of duties, upon foreign commodities, when particular countries are named. For instance, if you even mark in juxta position, the letters E, N, G, L, A, N, D, all the hallucinations and madness of party, immediately seize their brains; they fall to ranting and roaring about "colonial governments," want of patriotism, and God knows what besides; and like frantic horses that have run away with their riders, after taking the bits between their teeth, they scamper away over the illimitable fields of party contention, as regardless of what first started them, as if they have neither seen, nor heard it. But to resume my case—this man, who lives in some other country, used to buy a part of my produce, or take it in exchange for what I bought of him; but as he is not at liberty to sell his yard of cloth to me at the same price as at first, having to pay the government 25 cents more than he did, for the privilege of selling, he cannot allow me the same price for my grain, tobacco, cotton or sugar. Our barter then, must either cease entirely, or be greatly curtailed.—But there is anothor, and another, and another man in some other countries, who also sold to me the same, or other manufactures; and who is subjected to the same disabilities. The same cessation or curtailment, of necessity ensues in *our* commercial intercourse. Now unless we can stretch our credulity to the point of believing that one northern, or eastern man, provided he be a manufacturer, can eat as much of the surplus productions of American agriculture, as a thousand Europeans; and that the northern and eastern manufacturing establishments, can fabricate as many consumable articles as all the work shops of the commercial world, put together, we must unavoidably be drawn to the conclusion, that the inevitable effect of the new tariff must be, to compel us to buy dearer, and at the same time to sell cheaper than we now do, by diminishing both the number of the purchasers of our products, and the quantity of those articles—not of our own make, which we consume either from necessity or choice: *and all this too, for the exclusive benefit of the domestic manufacturer.* A loss of revenue, and the consequent necessity for direct taxes must certainly follow. The purse of Agriculture, like a candle burning at both ends, is exhausted by a double operation, as wasteful, as it is unnecessary.—The means of supplying it are first to be destroyed, and then, is to be "taken from it, even that which it hath not." It is to be gutted for the public treasury, when a complete evisceration has already been made for the private citizen-artificer. But the worst is yet to come.—The profits of agriculture and commerce, being thus greatly diminished; if not utterly destroyed, many of those who heretofore have cultivated the soil, and ploughed the ocean, from that freedom of choice, which nature's God has given them, will be as effectually compelled to abandon their occupation, as if Congress had said in so many words; "go to the spinning jenny, the loom, the anvil, or some other mechanic calling; for no longer shalt thou plough, sow, nor reap; no longer shalt thou spread thy canvass on the deep, unless you are resolved to starve, rather than obey us. Elect for yourselves—some must still delve in the earth, and coast along our shores; but we who have the right, (*the divine right*, for we derive it from no human source,) to judge and choose for you, tell you, that too many of you are engaged in these pursuits, and some must quit them. Be gone, and let us see you no more, but in the character of a manufacturer of some sort or other. We, the Congress of these United States, are irrevocably determined to be independent of the whole human race; and *home made*, we are resolved that every thing shall be, in despite of soil, climate, natural productions, prudence, policy, common sense and common justice."

This, or something like it, Mr. Editor, appears to me to be nothing more than a fair specimen, of what should be the preamble of the new Tariff Bill; and I sincerely hope, if it *must* pass, that something of the kind may be moved. If we agricultural people, and our brethren of the ocean are to be crushed in this way, it would be some small consolation to us, to see that the authors of such outrageous oppression, had boldness enough to proclaim to the world, both the reasons for their conduct, and the power by which their object has been accomplished Let future ages see that at a time when the light of science was fast dispelling from the whole face of the civilized, globe the pernicious heresies which heretofore had impeded the progress of political economy, it remained for an American congress to say;—"we,—we alone will resist this light with might and main. Nay, we will do more,—we will take up your cast off errors, and hug ourselves, and chuckle in our ignorance; as who should say,—Sir Solomons all, none but ourselves can be our parallels."

Mr. Editor, I will trespass on your time and patience, but a few minutes longer. Should this new Tariff Bill become the law of the land, my labours as a cultivator, and yours too, my good sir, as a teacher of cultivation, may as well be discontinued. For where will be the use of the American Farmer's preaching to us about the various matters of husbandry, when scarcely any farm in America will be worth cultivating, except those few which are immediately contiguous to manufacturing establishments; or those which supply them from a distance with the raw materials to work up,—the number of which can bear no comparison with the whole that would be cultivated, were the agriculturists of our country left at liberty to use foreign, as well as domestic markets. Their limbs, it is true, will not be restrained either by chains, or prisons; but if all the profits of foreign commerce are destroyed by the burthens imposed on it, the liberty of pursuing it is just as effectually annihilated, as by the incarceration of our bodies; because profit is the chief, or only object of the pursuit.

If this bill is passed, the principle assumed, is equivalent to a declaration that the various occupations of our citizens are completely under the controul of our government; who may cause them to be changed or discontinued when, and how they please. For the framers of the law will to no purpose disclaim the right to say to the agriculturist and the sailor, you shall turn spinner or weaver; so long as they assert any power, by the application of which they can so far diminish the profits both of agriculture and commerce as to leave no alternative to those who follow them, but starvation, or the abandonment of their professions. Nor will it be of the least use or advantage to us for these gentlemen to deny that they have any abstract constitutional sanction to tax one class of citizens for the benefit of another, so long as they *practically* take money from one, in the form of a tax upon foreign commodities, to put into the pockets of another. It is impossible not to see that they do this, when any duty upon imports is so high, as either to exclude foreign commodities altogether, or greatly to diminish their consumption. For it is most manifest that the duty in every such case will always be added to the price of the domestic manufacture, and will go into the pocket of the maker of the article for *his exclusive benefit*; whereas in all those cases where the duty was sufficiently low to admit of the sale of foreign commodities, *it being levied upon them*, went into *the public treasury*, there to contribute in the form of *public revenue*, to the *public good.*

To conclude;—there seems to me, Mr. Editor, but one remedy. for this impending, and most enormous injustice. It is acknowledged to be a desperate one; but so will be the disease for the cure of which it appears to be the only legitimate means left to us. Reason and argument, dissuasion, petition, remonstrance,—all have been tried, but I fear, in vain. This remedy is neither more nor less, than a non-consumption agreement solemnly entered into among ourselves; and inviolably observed, as was done in the Boston tea affair, which the new Tariff Bill strictly resembles in principle, as it does in all its chief bearings. For will it not be a tax contrary to the wishes,—against the consent,—and in violation of the interests of those who are to pay it? Will it not be a tax imposed by a legislative body wherein there is no adequate representation of agriculture or commerce; and *where there are many individuals—probably not less than twenty or thirty, who are themselves to receive a large part of this tax from being directly engaged either as principals or partners in manufacturing establishments?* And lastly,—will it not be a tax as much in contravention to the spirit of that federative, and compromising compact uniting under one government, those states originally entirely independent of each other; as the tea tax was a violation of those principles by which these same states constituted a part of the British Empire? I most conscienciously believe, sir, that it will; and that no other rightful way of opposing it, will be left. But I will stake my life upon the complete efficacy of this, if the intended victims of such ruinous policy will only resolutely determine on such a mode of counteraction, and patiently persevere in it, under all the temporary privations which it may bring upon them. But a short time would elapse before all matters would be put to rights.

In the name of the whole agricultural people of this union, I believe myself warranted in avowing that they all feel a preference for domestic manufactures, provided the price and quality be the same with similar articles of foreign fabrick. But in their name also, I claim the liberty of choice, as matter of *right*, not of *favour.* Nor will we tamely, like sheep, submit to be shorn of this right. If we must be eternally stunned with the cry of "let us be independent of the whole world;"—in the name of all the powers of infatuation and folly, let us have this insulated blessedness in perfection Let us carry this principle of "*living within ourselves*" to the last point to which it can go; and after annihilating our intercourse with nation after nation, and people after people, nothing will remain to be done, but for every man to become his own clothier, victualler, artificer, and every thing else; for *to this consideration* does the policy which I am deprecating, inevitably tend; and *in this*, or something not very different, must it necessarily terminate.

If there are any rights, immunities, and privileges enjoyed by agriculture and commerce of an exclusive character—away with them all; and let manufactures enjoy with them, every benefit of protection which government can legitimately afford; *but no more:* to award any thing beyond this, to manufacturers, as it is now proposed to do, will be unjust, oppressive, and tyrannical. That the Tariff should be revised, and permanently fixed, is highly desirable for all parties;—frequent changes in the rates of imposts being far more pernicious, than even high duties, to every interest liable to be affected by them. But in my humble judgment the sole design of such revision should be to reduce,—not to augment the existing duties. For if the only rightful object of them be revenue, and nothing appears to me more clear; I challenge any man to produce a single instance from the history of the impost laws of any country upon earth,—deriving revenue from such a source, wherein the reduction of a duty, already high, has not produced an augmentation of revenue.

As a striking illustration of this fact I will finish what I have to say, with some very remarkable instances taken from the history of British taxation, by which it will appear as manifest as the light of day, that *decrease of revenue as invariably follows increase of duty*; and vice versa, *increase of revenue, the decrease of duty*, as day follows night.

Previous to 1745 the excise duty of four shillings a pound upon tea, yielded on an average about £150,000 a year. In that year this duty was reduced to one shilling, and 25 per cent. ad valorem; and in 1746 this reduction augmented the revenue to £243,000!—in 1747 to £257,937! and in 1748, to £303,545!!

In 1748 the duties were again increased, and fluctuated from 64 to 119 per cent. ad valorem; which gave rise to such excessive smuggling, and consequent loss of revenue from this source, that the parliament having dearly bought some experience, once more (in 1784) reduced the duty from 119 to 12½ per cent. Even a greater increase of revenne followed than before; for the East India companies' sales were nearly tripled in the two subsequent years,—having risen from £5,857,883 (the sales of 1783) to £16,307,433—being the amount of sales for 1785.

In 1787 the duty upon wine and spirits was reduced 50 per cent. and the revenue was greatly increased In 1805 the duty on coffee was raised 1-3, and that year the product of this duty diminished 1-8, instead of increasing 1-3. At last this duty was lowered from two shillings to seven pence per cwt. Previous to 1808 when this reduction took place, the average annual revenue for the three preceding years, was £166,000, whereas the average annual produce of the reduced duty, for the next three years, was £195,000.

From 1803 to 1806 the duties upon sugar were augmented about 50 per cent. The product of the old duties for the 3 previous years, had been £2,778,000, that of 1784 after these duties had been raised 20 per cent. was only £2,537,000, being £241,000 less than the low duties yielded.

The duties on leather, after being stationary for nearly a century, were doubled in 1813, and have scarcely ever since, (say to 1822) exceeded half a million, having frequently fallen short of that sum; although in 1812 the low duty produced £394,000

The duties on foreign wines have been nearly tripled since 1792. The last increase in 1815 imposed £30 a ton on French, and £20 a ton on Portuguese wine. The consequence has been, that the annual diminution of their consumption for the five years subsequent to 1815, compared with that of the five preceding years, has been *seven thousand four hundred and sixty four tons!!* and a similar comparison of the average annual duties of the same periods, show an annual decrease of revenue, by this augmented duty, amounting to £126,841!!

But it is surely unnecessary to cite more examples to demonstrate my position, that high duties diminish, and low ones increase revenue; and consequently that the new Tariff bill can not for a moment be sustained on the plea of aiding the treasury. The only possible ground left then, upon which even a plausible pretext can be founded to support it, is, that it *may aid manufactures.* It now remains for an enlightened public to decide, whether this expected benefit will in any degree compensate for the certain and monstrous oppression which it will most assuredly inflict on all other classes of our citizens; and even upon all that portion of the manufacturers themselves, immediately connected with, and dependent upon agriculture and commerce.

Your friend,
And fellow sufferer,
RURIS CONSULTUS.

AGRICULTURE.

DRY CULTURE.

IN COUNCIL, *27th August*, 1823.

The committee of dry culture submitted to Council a letter from Dr. Screven, on the subject of dry culture in the south of Europe.—They stated it was received in consequence of an application to him by the committee, that he would communicate the result of his observations whilst in Europe upon that subject. That it embraced a more comprehensive view, than any hitherto presented to the public, and that it appeared emminently calculated to set the question of the utility of the dry culture system permanently at rest, it doubts still existed.

WM. C. DANIELL,
M. HERBERT,
F. S. FELL.

On Motion—*Resolved*, That the communication of Dr. Screven on the subject of dry culture be published for the information of the citizens.

Extract from the minutes of Council.
M. MYERS, c. c.

TO WILLIAM, C. DANIELL,
Chairman of the Committee of Dry Culture.

Sir—Although a silent, I was an early advocate for the system whose operations your committee has been appointed to inspect. I witnessed with pleasure the enthusiasm with which all classes of the community contributed to the trial of the grand experiment which has for its object the amelioration of our autumnal diseases. The sacrifices made by the planters, the debt incurred by the public treasury, the exertions of the council and of private individuals to put the system in operation, and the generous devotion of the Physicians, who by their reasoning, and by their experience illustrated its utility, deserve the admiration of the world and will command that of succeeding generations. Consuls, Emperors, Kings and Dukes have improved the health of countries and cities, by draining marshes, by making canals and other internal improvements, by prohibiting the cultivation of vegetables noxious in their influence upon the human body, and by removing other causes productive of disease. But where in the annals of history do we read of a whole people reflecting upon the causes of their epidemics, and endeavouring to remove them at an immense sacrifice of public as well as private property? We search in vain for a parallel to an event so conspicuous in the history of Savannah, as the voluntary substitution by the people of dry for wet culture. If we look abroad, we cannot find a precedent among even the most civilized nations. It is only in America, where the people have been accustomed to think and act for themselves, to find out and remove the causes of disease whether of a physical or a moral nature, that we can expect great and glorious events to arise out of the sole agency of communities of men without the occurrence of revolutions and civil wars. The culture of rice, as we will presently show, has been forbidden altogether in some countries, limited to certain districts in others, and in all, where it is tolerated, it is subject to certain rules of public Hygiene; but these prohibitory and restrictive laws emanated in each instance from arbitrary power, and not from the *will* of the people.

The injurious influence of rice-fields, marshes, collections of stagnant water, &c. has been triumphantly proved. The citizens of Savannah have acknowledged it, and with the liberality and the enterprise characteristic of them, have endeavoured to remove the causes giving rise to that influence. But there are persons who doubt, some who absolutely deny the fact, and others who through various motives which it is unnecessary to enumerate, are determined enemies to a system ennobled by its origin, by the sacrifices made to support it, and by its happy influence upon the public health. It is therefore incumbent upon all who take an interest in the system to adduce facts in its favour, in order to confirm the faith of those who believe and remove the doubts of the incredulous. Under that impression, I have been induced to put together a few facts in illustration of the dry culture system. They were furnished by the best works which treat on the subject, and by observations made during a visit to two of the countries to which they relate.

1st. Attempts were made in the 18th century to introduce into France the culture of rice. During the reign of Louis XV. and under the ministry of Cardinal Fleury, it was cultivated in the province of Auvergne and succeeded very well, but its farther cultivation was prohibited by order of government, because it infected the air, and produced epidemics in the places where it was cultivated.—See. Dict. univ. d'agriculture par l'Abbe Rozier. In the same work is the following observation—"It is notorious that in the countries of Europe where rice is cultivated, tertian fevers are almost constant, and prove very destructive to the inhabitants." It is added that fevers were multiplied in the province of Languedoc and the territory of Fore's when its culture was there introduced.

2d. Spain is one of the countries of Europe in which rice has been pretty extensively cultivated. It is there forbiddden by order of government to make rice plantations within three miles of the cities. In the early part of this century, there appeared a very interesting publication by Don Antonio Joseph Cavinilles on the agriculture of Valencia, in which he treats the subject of rice culture and its influence upon health; "he gives a table of births and deaths from the year 1730 to 1787, in the different places in which the cultivation of rice has been practised. The result is, that during the space of 58 years, there have been born 42,022 children in the places where rice was not cultivated, and only 36,248, where the cultivation of rice was carried on; on the other hand, during the same period of 58 years 39,595 persons have died in the places where rice was grown, and only 29,630 in the places where it was not cultivated." See N. Y. Med. Rep. The same author examines the question whether the cultivation of rice should not be altogether proscribed in Spain. The above mentioned result of his investigations evinces what was his opinion upon this subject.

3. Denina, in his revolutions of Italy, says that the cultivation of rice commenced in Italy between the 15th and 17th centuries, at a time when the inhabitants and cultivators were few, and the deserted and uncultivated lands had become wet and marshy. It was introduced into Tuscany about the year 1600, by Francis I. whose object in introducing it was to enrich the public treasury which was kept empty and poor by the want of a sufficient population. Denina eloquently opposes such a policy in the following words—"Now this expedient of increasing the riches of a country, is in truth the means of perpetuating its misery: because, as is well known to all, rice fields, by rendering the country unhealthy, not only destroy its population and prevent its increase, but extinguish industry, activity and enterprise." He again says elsewhere, that "the cultivation of rice in Italy has been in the first place an effect and afterwards a cause of depopulation and of real misery in many places." With a few exceptions, there is perhaps no part of the world better adapted for the culture of rice than the vast plain of Lombardy. The alluvial nature of its soil, the numerous streams which, having their origin in the eternal fountains of the Alps, Appenines and in the Lakes, traverse it in every direction: the number of canals intersecting it; the mildness of the climate, and the protection from winds, afforded by two high barriers of mountains—all these advantages combine to render it extremely well suited for wet culture. An active, industrious and intelligent population has not lost sight of such advantages. Rice has been cultivated to a considerable extent in Piedmont and Milan, and still continues to form one of the prominent articles of their agriculture, notwithstanding its acknowledged bad effects upon the health of the inhabitants. The traveller sees numerous rice fields on the public roads leading from Turin and Pavia to Milan; as he approaches the latter, he suddenly loses sight of them within five miles of the city, and very naturally begs to be informed why lands so well adapted to the culture of rice are not used for that purpose: he is told that this grain was formerly cultivated in the vicinity of Milan, but that in consequence of its having been found detrimental to the health of the inhabitants, its cultivation was prohibited within five miles of the city. It is curious to observe the difference in the aspect of the people inhabiting the rice countries of Lombardy, and of those living in the same plain where rice is not cultivated. In that of the former, is to be seen the *sallow* complexion so characteristic of unhealthy regions, and on the contrary in that of the latter, the rosy hue of health, Chateauvieux in his lettres ecrites d'Italie, gives an animated, though perhaps an exaggerated description of those engaged in the cultivation of rice—he says "as you pass along the dykes of the rice fields, you see the unhappy labourers wandering like so many ghosts through the reeds and stopping at the sluices which they have hardly strength to open and shut They are not the only victims—the reapers sel-

dom finish the harvest without being seized with shiverings, and carrying with them an ague, from which their return to the high grounds does not always enable them to recover. . The countries therefore under the cultivation of rice are thinly inhabited, and the few inhabitants are in a sickly and diseased state." Melchiore Maggiore, an Italian statistical writer has compared the fatality among the inhabitants of ten departments of Lombardy under rice culture with that of the *same* departments under dry culture. The following is his table.

Rice Culture.	Deaths.	Dry Culture.	Deaths.
Adige	1 in 26	Adige	1 in 28
Agogna	1 " 25	Agogna	1 " 29
Alto Po	1 " 28	Alto Po	1 " 30
Bracchiliogne	1 " 26	Bracchiliogne	1 " 30
Brenta	1 " 27	Brenta	1 " 25
Passo Po	1 " 25	Passo Po	1 " 27
Mella	1 " 26	Mella	1 " 32
Mincio	1 " 26	Mincio	1 " 29
Olona	1 " 28	Olona	1 " 26
Sirio	1 " 26	Sirio	1 " 31

See Lyman's Polit. State of Italy.

The same author gives more births and marriages to rice countries. His calculation may be correct as it regards the departments upon which he made his observations, but that it will not apply to all countries is evident from the statement above cited of Cavinilles who gives an excess of births to countries of Spain not cultivated in rice of 5,774. The government of Milan well aware of the tendency which rice cultivation has to keep down and degrade the population of the country, has forbidden the extension of rice fields beyond their present limits.

4th. The culture of rice is very limited in the states of the church. The only part of them where it has been cultivated at all, is the country situated to the east of Bologna. Its culture was there introduced about 20 years ago, but is since almost abandoned in consequence of its observed bad effect upon the health of the inhabitants. Dr. Clark in a late work on the climate and diseases of France and Italy, makes the following observations—"There were a few intermittent but no continued fevers in the hospital of Bologna, when I was there. The former had become more frequent since the cultivation of rice had been introduced into the country around Bologna, about 20 years ago." In 1816, a report was made by a board of Commissioners appointed by the Roman government, to examine into the influence upon public health, of the rice plantations situated in that portion of the states of the church. The result of their investigations is to the following effect—1st. "That it is due to public health to abolish all rice fields in districts enjoying a good air, and that are suitable for a more wholesome cultivation, or where the villages and houses are not situated at a sufficient distance for safety. 2nd. That rice fields should be maintained only in those low, damp places suitable for no other cultivation, at proper distances from human habitations and in natural valleys—the creating of artificial valleys for the purpose of collecting water being forbidden."

See Lyman's Polit. state of Italy.

(To be concluded in our next.)

REMARKS ON SOILS.

Notwithstanding the different appearances which the surface of the earth exhibits, it is, in reality, compounded, in all its varieties of wet and dry, of warm and cold, of light and heavy, of barren and fruitful, only of four simple and primitive earths—clay, sand, lime, and magnesia.

I. Clay, called indifferently in agricultural publications, alumine, or argillaceous earth, is a substance so easily distinguished from all others, and so familiarly known, that it needs no particular description. When pure, it is white; but in general it is found discoloured by the mineral waters, which are perpetually escaping from their beds, and running on the surface. It is tinged with blue, brown, gray, and red shades, for it has a strong affinity to all colouring matter, but these tints affect it not materially in an agricultural point of view, and are, therefore, of little consequence. As an ingredient of soil, it has the four following properties, by which it exerts a powerful effect on vegetation:

1st. It absorbs water like a sponge, and is so close in the texture, as to prevent it from filtrating through its pores.
2d. When thoroughly soaked, and afterwards dried, it hardens and cakes into a solid mass.
3d. It shrinks considerably in bulk, when exposed to heat, and the contraction of its parts is in proportion to the intensity of that heat.
4th. It powerfully retards putrefaction, by enclosing as in a case, animal and vegetable remains, and thus shutting out the dissolvent action of the external air.

If we now call to our recollection the purposes served by the soil, and detailed in my last letter, we shall be enabled to judge how far clay, in its original and unsubdued state, is favourable to vegetation. The roots, which are the collectors of the nutriment, and are withal of a tender and delicate texture, cannot easily stretch themselves in a substance of such stiffness and tenacity; and which, besides, so readily consolidates after rain into a compact body. Its closeness opposes material resistance to their extension, and accordingly, in its unmellowed state, the fibres are hampered, and cannot ramble forth to pasture. Besides, admitting that they overcome in part this obstacle in the soil, they must, whenever it hardens in the sun and gapes into chinks, be violently torn asunder, and separated from the stem. The stronger fibres may escape unhurt; but, generally speaking, the finer and more slender filaments must suffer considerably. If clay be so hurtful on the surface, it is almost equally pernicious in the subsoil, from the capacity it has of interrupting the passage of water downwards, and keeping the roots perpetually drenched—an evil no less destructive to the health and vigour of the crop, than the opposite extreme. From its antiseptic power, putrefaction goes on slowly, and the vegetables growing on it are ill supplied with that generous and nutritious food, essential to their perfection and maturity. All its qualities, therefore, are unfriendly to vegetation, except its capacity of absorbing and retaining moisture, and this is of such immense importance as, in some measure, to make atonement for its other defects. When existing by itself, this virtue which it possesses, in so eminent a degree, is useless and unavailing; but when mixed with other materials of a loose and friable nature, it gives tenacity and firmness to the whole, and is highly retentive of the dews and rains which fall to fertilize the soil.

II. Sand or gravel, called sometimes silex, silica, silicious matter, or earth of flints, is distinguished by properties of a totally opposite character, which require to be enumerated that their influence may be distinctly and visibly displayed.

1st. Sand is incapable of retaining water when poured on it, and far less of attracting moisture from the atmosphere.
2d. It powerfully promotes putrefaction, but allows the gases set at liberty to escape.
3d. It has little or no cohesion among its parts, and never binds by the alternations of wet and dry into a compact body.

It will appear from this account of the properties of sand, that it is provided as a corrector of alumine, and that in their effects, the two are destined to counterwork each other. This sort of contrivance in nature is no uncommon occurrence; and while we trace such remote tendencies and bearings, we are struck with the wisdom that fabricated and reared this noble edifice.—Inconveniences are obviated by correspondent checks, and this system of balancing all things displays more conspicuously the indications of design, than if there had been no difficulties to overcome, and no evils to remedy. Let us contrast sand and clay in their qualities, that this singular and important truth may be more strongly impressed. Sand suffers water to filter easily; clay is highly retentive; sand promotes putrefaction; clay delays it, but absorbs the gases, which are formed in the decomposition; sand opens an unobstructed path for the extension of the roots; clay gives them firmness in their course, and supplies the moisture which sustains them; in fine, the two may be classed among the contending elements of matter, which, by a union, heighten their common virtues, while their defects are rectified and subdued.

III. Lime, commonly called calcareous earth, enters into the composition of soils. This is never found naturally in a pure state, but in combination with carbonic acid, for which it has so strong an affinity that it attracts it from the atmosphere. The burning of limestone is undertaken for no other purpose than to expel by heat the carbonic acid, and reduce it to a caustic powder, for the purpose either of building or agriculture, and in this process it loses about the half of its weight. But no sooner is quick lime applied to use, and exposed to the atmosphere, than it greedily absorbs, first moisture, and then carbonic acid, and thus either in the ground, or in the new formed wall. it quickly hardens and returns to its original state.

1st. Lime is closer than sand, but much less adhesive than clay. It occupies, therefore, a middle region between the two, free from their imperfections, and blending their common qualities.
2d. It is a powerful promoter of putrefaction, and helps to decompose the animal and vegetable matter, lying in the soil. To this circumstance is owing, in a great measure, its efficacy as a manure.
3d. It has the power of fixing and retaining a very great quantity of carbonic acid, and although it combines chemically with a certain portion, which can only be expelled by red heat; yet the excess can be easily disengaged in a low temperature, and thus tends to nourish the growing crops.

It is not necessary to dilate farther upon the properties of calcareous earth, as, at the first glance, it must be recognised as a highly valuable ingredient; and accordingly, wherever agriculture is carried on with spirit, it is eagerly sought after, though at a high price. This earth exists in immense abundance among the solid strata of our globe, mostly without any foreign mixture, except the acids with which it combines; but occasionally is blended also with the other primitive masses. With carbonic acid, which in a previous letter I particularly described, it forms the most frequent compounds—denominated carbonates of lime—and assumes a variety of names and appearances, and even possesses distinct properties. Spar, marble, stalactites, limestone and chalk are all varieties of this combination.—With the sulphuric acid (which is composed of sulphur and oxygen) it forms plaster of paris—a rock well known, as it is profusely scattered by the hand of nature throughout this Province. Lime is, also, found mixed with clay, and sometimes with sand, and then receives the appellation of marl, and which is valuable precisely in proportion to the quantity of this earth. Sea shells too derive their fertilizing qualities from the lime of which they are composed; and, without descending to farther particulars, it may be safely affirmed, that so necessary is calcareous earth in the composition of soils, that wherever nature has not blended it in their original formation, the agriculturist should, though at great expense and much trouble, supply the deficiency.

IV. The last earth which has been found in soils, and that too in a much smaller proportion than the other three, is magnesia—a substance, with which every farmer must be acquainted, since it is commonly used as a medicine of the shops. Its properties are nearly analogous to those of lime, and were long supposed to operate in the same way. It has also a strong, though less affinity for carbonic acid, and often forms a constituent principle in limestone rock; but at present agriculturists are divided about its usefulness as a manure; some of them holding it up as a poison to plants, and others supporting it by an appeal to experiments. It is not worth while to introduce my readers to this dispute; as I am uncertain whether our limestone contains any portion of magnesia; although its presence in the old country, upon accurate investigation, is found to be a very common occurrence. At all events, it is only pernicious when applied in an excessive dose; and this holds equally true with respect to lime, for these two earths should, in all cases, be used sparingly by the skilful cultivator.

By analyzing the various soils and subsoils, they have been found to resolve themselves into one or all of these primitive earths; and their barrenness and fertility have, in no small degree depended on the mixing and assorting of these ingredients. Loam is by no means a distinct body, possessing in itself appropriate and marked character, as many of our farmers, with whom I have conversed, ignorantly suppose; but is a combination of clay, sand or calcareous matter; and as we advance in science, and men among us arise, versed in conducting such investigations, the component parts of our rich intervals and uplands will be ascertained and given to the public. The very diversity, which exists among what are accounted loams, is a decisive proof of what I advance. Some of them we denominate clayey, from the excess of argillaceous matter, others open and light, from the preponderance of sand. In fact, these two original ingredients seem capable of being compounded in such an infinite variety of ways, as to give occasion to that diversified texture of soils met with in all countries and situations, and are contrived to counteract each other's qualities, that by their union, they might furnish the basis of that beautiful and splendid creation of flowers and plants, of shrubs and trees, which decorate the face of nature, and charm us by a sweet assemblage of all that is gay and soft in colouring, with all that is elegant and attractive in design.

Besides these four primitive earths, which constitute equally the soil and subsoil, the upper of these, or the mould as it is sometimes called, contains the putrid relics of organized substances, that have grown and decayed upon it, or have been conveyed thither in the progress of cultivation. The decomposition of these is the proximate cause of fertility; and the richness of soils bears reference to the relative quantities. The residual earth remaining after the process of dissolution, is extremely light in weight, and always of a blackish colour. It is owing to this, that a garden, which has been under long continued culture, approaches to a black tinge, progressively deepening according to the abundance of this matter.

In addition, all soils lying in the territories of an old country, are found to contain various chemical compounds, mineral salts, and metallic oxids; some of which are beneficial, others harmless, and a few injurious to vegetation; and which either pre-existed in the strata, from which the surface has been formed, or have been carried to it by subterraneous springs, or by foreign causes operating in the course of past ages. These chemical bodies are so few in number, so small in quantity, and generally of such unimportant efficacy in vegetation, that it would be preposterous, considering the present state of knowledge, to dilate upon them in these elementary letters. The most frequent are, epsom and common salt, combinations of potash, lime, and magnesia, with the acids, and the oxid of iron—which is just the rust produced by exposing this metal to the action of the air. It is this oxid, which gives the brown and reddish colour, as well as the intermediate shades, to sand and clays.

It seems plain, that considerable advantages must be derived to the practical farmer from analyzing the different kinds of soils, from comparing the proportion of the earths in the productive, with those found in the barren, from studying the separate effects of these ingredients and from all these results, deducing the most skilful plan of procedure in effectuating permanent improvements. Chemists of great fame have embarked in this line of research, and vast progress has been made by their elucidations.—They have laid down rules to assist and guide the agriculturist in this department of the arts; they have exemplified the different processes to be performed, and even described the instruments necessary for an elaborate, and accurate analysis.

There is, however, a less laborious and less intricate analysis of soils, defective as our knowledge of chemistry may be, which is placed within our reach, and which may in time lay the foundation of more perfect and accurate methods.

In the field to be examined, take earth a little below the surface, from four separate places, about 1-4 lb. avoirdupois from each. Expose it to the sun, or before the fire, till it is completely dry, and turn it over frequently that it may be well mixed together. From the heap take exactly four ounces, and pass this through a fine sieve, which will allow all the particles of sand and gravel to escape, but hold back stones, small fibrous roots, and decayed wood Weigh the two parts separately, and take a note of each.—The stones and other bulky materials are then to be examined apart from the roots and wood.—If they are hard and rough to the touch, and scratch glass easily, they are siliceous or flinty; if they are, without much difficulty, broken to pieces by the fingers, and can be scraped by a knife to powder, they are aluminous or clayey; or if, when put in a wine glass, and common vinegar poured upon them, small air bubbles ascend to the top of the liquid, they are calcareous. The finely divided matter, which ran through the sieve, must next undergo the test of experiment. After being weighed, agitate the whole in water, till the earth be taken up from the bottom and mechanically suspended, adding water till this effect be produced. Allow the mass then to settle for two or three minutes, and in that time the sandy particles shall have all sunk to the bottom. Pour off the water, which will then contain the clay in suspension with the insoluble earth arising from animal and vegetable decomposition. The sand should first be attended to; and if from inspection it be thought either siliceous or calcareous in its nature, the requisite tests may be instantly applied. By this time the mixture will have deposited at the bottom of the vessel the clay, and other earths, with the insoluble animal and vegetable matter. After pouring off the water, dry the sediment, and apply a strong fire by placing it on the bottom of a pot heated to redness, and the animal and vegetable matter will burn and fly off in aeriform products. The remainder lying in the bottom will be found to consist of clay,—magnesia or lime. To obtain accuracy, another 1-4 lb. of earth should be taken from the same heap, and the whole process gone over, a second, a third or even a fourth time, that the operator may rectify any blunders he had previously committed, and be satisfied as to the results of his experiment. He should provide himself with a pair of fine scales and a set of weights, divided at least into ounces and drachms. Although vinegar will detect lime by effervescence, it does not dissolve it so effectually as the nitric or muriatic acids; small quantities of which may be procured from the druggists at no great expense.

[*Acadian Recorder.*

GARLIC—HOW TO EXTIRPATE IT—

From a practical and judicious farmer, and one of our most enlightened correspondents.

TO THE EDITOR OF THE AMERICAN FARMER.

Dear Sir,

When I state the fact to you, that for some years after I commenced farming, my fields were full of garlic, and my wheat had so much in it, that we never thought of sending it to mill for our own use without hand picking, after all had been done with the fan, that could be done—and as my wheat now goes to market nearly free from this pest, you may be inclined to place some confidence in my method of it of freeing my wheat.

My mode is to attack this pest in its strong hold, and I have destroyed its bulbs by millions and tens of millions in the soil. My instruments were simply the *plough-share, the roller, and the harrow.* My method of using them as follows—into the field intended to be laid down in wheat the following autumn, I put my ploughs, in December, January, or the first half of February, according to weather and convenience. The flushing, or turning up was done, so as to disturb and turn topsyturvy all the bulbs of garlic, and to expose them as much as possible. To be sure of this, the ploughing was done a fraction deeper (but not more) than the ground had been usually ploughed before.

In April the field was cross ploughed the same depth, rolled, and well harrowed. It has been during this harrowing, that I have particularly observed the effects of my method. I have followed the harrow and examined bunch after bunch of garlic The main bulbs appeared very much worsted, and in a very unthriving condition. The offset bulbs in every stage of evident decay. Many not only dead, but easily reducible to powder by the rubbing pressure of the thumb and finger. The field was again cross ploughed, and harrowed in June. At this cultivation a great majority of the offset bulbs, which had existed, could not be found, and most of the others were lifeless. Many of the main bulbs were alive, but did not recover so as to produce seed tops in the crop of wheat. The field was again ploughed and harrowed in August and Septemher, and in October was seeded in wheat, and the wheat ploughed in. The spring after this crop of wheat was harvested, the field was again broke up and put into Indian corn, and of course was well cultivated through this season. In October wheat was seeded among the corn.

The above work was done in order to prepare the ground in the best manner for wheat, and in prosecution of what has been called in Maryland the five field system, two of which are annually in wheat and one in corn. Each field was first subjected to the process first described (called naked fallow) for the purpose of cleaning it of filth generally, noxious weeds, blue grass, &c. and of putting it into the best tilth

It has been said that different crops would kill garlic. Among them the oat crop has had a decided preference. A part of one of my fields, which had been broken in January and February for wheat, was put down in oats in March. The remainder had the April and June cultivations of my system. In August and September the oat stubble was ploughed and harrowed with the rest of the field. The next spring there was certainly much less garlic in the wheat on the oat ground, than there had been in the previous crops of wheat from that field; but still there was more garlic in it than I wished to see, and with large seed heads. Among the wheat on the parts of the field not encumbered with the oat crop; but which had had the benefit of the April and June cultivations, there was scarcely a head of garlic to be found. From the above I concluded that the oats had run off with a credit entirely belonging and due to the plough and the harrow. I know of no crop, that deserves the name of a cleaning crop, except precisely in the ratio of the labour and frequency of the cultivations, which it requires to prepare for it, or to make it. And only one which I would think of admitting where the prime object was to get rid of garlic; to wit—tobacco—and I would rather be without that. I pronounce the plough, the roller, and the harrow, all sufficient, and best, if judiciously and actively employed. I know very well this system will be objected to, because it involves a great deal of labour. I shall be told I work almost a year for nothing; nay for worse than nothing, for I shall kill my land by exposing it naked to the sun.

I have seen and heard a hundred such assertions written and oral; but the real fact of a piece of land having been killed by exposure to the sun by cultivation I have never yet found. That this mode of keeping a field naked, will produce less profit than by taking from it a summer crop is a point not now under consideration. To kill garlic is the object; the injury of the land by exposure to sun the question. And this injury I say has been a thousand times asserted; but I have never seen it proved. I pursued this course from 1810 to 1817; during which time all my fields were subjected to it once, some twice. In 1810, I subjected a particular field to it, without manure—in 1811 I cut upwards of twenty bushels of wheat per acre from it—in 1812 it went into Indian corn—in 1813 I cut wheat from it after corn, about half the quantity per acre, of the preceding naked fallow crop. Between December, 1814, and February, 1815, it was again well turned up, and particularly well cultivated in April, June, August and September; kept light and open, and exposed naked to the sun, except twelve acres (which I considered the best twelve acres in the field). These were seeded in oats; and the last of June a thick oat crop just well in head, was with a chain plough completely turned under. The after harvest cultivations of the whole field were alike. The field was seeded in wheat in October. The seeding of the oat dressed piece was the last, and was done on the 25th and 26th of October. Carry along with you that from first to last, I put no manure on this field, except the green oats, if that may be so called. My ground showed no failure from its second sunning. My wheat grew kindly, except on the oat ground, and was perfectly free from garlic and all other filth—and 68 acres of the field yelded me by actual measurement 24 bushels of wheat per acre. The oat ground gave me very little over twelve.

Recollect, sir, I am not lauding a system; I am merely recording facts.

After this period I was driven from the system, because I could not produce corn enough from one fifth of my ground, to feed my family and stock. But I pursued the system a sufficient length of time to clear my fields of filth; to show me that it was by far the most certain and best mode of making a crop of wheat; that I could make from 50 to 100 per cent. more by this mode, than I could after corn or oats; and that I could not then, nor have I yet been able to discover any injury which I inflicted on my ground, by exposing it naked to the full power of the sun. Any one would rationally expect, that the effort of an acre, by which it produced 24 bushels would exhaust it double as much, as the effort to produce twelve bushels; but I did not find the exhaustion at all in this ratio.

If I mistake not some of the gentlemen, who have preserved the five field system with clover; and have turned in their clover in August, can bear testimony to my garlic system. All of them, who had any garlic in their lands, can most grieviously testify that August fallows and clover lays have increased their garlic a million fold; and some of them, who have winter broke the stubbles of these clover lay wheat fields, and put them in corn the following spring, can also testify, that the wheat seeded among this corn on the field, that had been winter broke, (notwithstanding the previous crop of clover lay wheat had been full of garlic) was comparatively free from garlic.

It is useless to pretend to farm, if you are afraid of labour. I have never produced a useful agricultural result without adequate force; and very generally my success has been exactly in the ratio of the labour and pains bestowed. I consider the winter breaking, and the April and June cultivations as the garlic destroying operations. The work done after that time had no reference to the garlic, but was merely a continuation of the preparation for wheat. The above system reduced the garlic to a trifle, and cleaned my ground of all other filth, except one or two small plots of mow-drop. And I believe five successive winter ploughings, and spring cultivations, would effect the destruction even of this pest; the ground might be manured after every June cultivation, and planted in a crop of Tobacco, or Irish potatoes to repay the expenses of cultivation. Were I now to undertake to destroy the garlic in a piece of ground, to perfect the system, in addition to what I did, I would also winter break the field for the Indian corn, that was to succeed the fallow wheat.

Very respectfully,
Your ob't serv't,
CRŒSINUS.

GARLIC.

CONTRIVANCES FOR SEPARATING GARLIC FROM SMALL GRAIN.

[A letter was addressed some weeks since by a gentleman in the South to his friend at Washington, to know what contrivances were in use in Maryland for separating garlic from small grain—and how far the presence or absence of garlic affected the price of grain in our market, &c. The letter was handed over to the Editor of this paper as being more in his way, and by him again passed to a correspondent to whom he was sure the best machinery and the most effectual practises for this object were familiar. His answer was in the shape and spirit of one private letter to another, but the subject is one which concerns so many that we have ventured to insert it in the Farmer, suppressing all names. *There* it will equally well answer the purpose of the enquirer, and prove useful to many others.
Edit. Am. Far.]

"The only contrivance that has ever been much used in this section of our country, is what is called a garlic riddle, fitted to the common wheat fan, and used in the stead of the common fine riddle. The holes in the net of a common riddle are square, and of a size a fraction over the length of a large grain of wheat—so that the grain will pass through, whether it fall on the net crossways or lengthways. The common screen riddle of a fan is a wire net of the same square construction, but with the meshes so small as not to permit a grain of wheat of any value to pass through it. Garlic being a rounder grain than wheat, and varying more in size, the garlic riddle is made with the holes, or meshes, parallelograms—through these parallelograms, the largest grains of wheat will pass lengthways; but all the grains of garlic larger, or of a fraction greater diameter than a large grain of wheat, will not pass, but must shake over among the tailends and larger filth. The grains of garlic smaller than the wheat, find their way through the screen riddle. Thus, by a few fannings, all the grains of garlic larger than wheat, and many of those smaller than wheat, are separated—but all the grains of garlic of the average diameter of good wheat, and this is generally the full half, will accompany and remain with the wheat. I have seen fans with a great variety of riddles, but none that would effect more than above mentioned.

"I recollect to have seen an account of a contrivance some years ago, and I think in the Farmer, of a gentleman in Calvert county, of this state—and the impression I have left of it is this—the wheat is supposed on the floor of the third story; in the second story there was a hopper filled, with one side several inches lower than the others.—to this lower side was attached an inclined plane, contracting like a funnel into a pipe. A pump was so placed, as to throw a constant stream of water into the hopper. The wheat also descended through a spout into the hopper. The wheat and water were made to fall into the hopper together—the wheat just as fast as the aperture in the bottom of the hopper would deliver it; the water so much faster, that the hopper was kept full of water, and a portion constantly running over its lower side. The idea was, that as soon as the wheat, and garlic, and water mingled in the hopper, the wheat would sink and be delivered with a portion of the water through the bottom; and that the garlic would instantly float, and all pass over the lower side of the hopper with the surplus water through a pipe out of the house. The wheat was to be immediately separated from the water by passing over a very fine inclined screen, and was to descend in a scattering shower into a stove room on the lower floor, heated to so high a temperature as to dry it as it descended.

"This contrivance was to do business upon a large scale, and was calculated for the use of large flouring mills. I have heard nothing of it for some years.

"I have known garlic to injure the sale of wheat from 5 to 40 per cent. according to the quantity in it. A gentlemen whose lands are very much infested with it, mentioned to me in the last autumn, that it gave him infinite trouble; that he had been driven to separate it by opening the sheaves and taking it out by hand. His wheat thus cleansed brought him 125 cents, while that gotten out without this tedious and most troublesome precautionary work, was dull sale at 75 cents the bushel.

A simple, effectual, and cheap contrivance would certainly be extremely useful in Maryland. But it must be very cheap, or it would never get into general use. The garlic is generally most troublesome on the poorest farms. After the wheat has been kept till the fall, and the garlic has become dried a little, and evidently lighter than the wheat, the best and simplest method I ever tried is to take the shaking riddle entirely out. Let the wheat descend from the hopper in a broad thin stream directly on the screen board, and of course exposed to the full effect of the wings—let the screen board be well pushed down; the fan being turned very briskly, while the superior weight of the wheat causes it to fall on the screen board, the garlic is blown over by the force of the wind.

"I have heard of a light rake head, long enough, say eight or ten feet, to reach from furrow to furrow of a wheat land, with small teeth four or five inches long, and placed so close as just to let heads of wheat pass between the teeth, but to catch and take off the round heads of the garlic. This is carried by two men, each walking in a furrow, who carry it the proper height to catch and pull off the heads of garlic. But this is a dreadful method—while it cleans the wheat, it fills the ground and multiplies the evil."

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

BUDDING.

Salem, (Ind.) Jan. 14, 1824.

DEAR SIR,

I have practised a mode of budding fruit trees, for some years past, which I do not recollect to have seen described in print; it has succeeded so far, very well with me, and may prove new and useful, to some of your readers. It is, budding from cuttings, taken from bearing trees in February, and preserved in boxes of sand in a cellar, until wanted, in the same manner as if intended for grafting. They will keep, in this manner, sound, until the middle of June, and perhaps longer, and which may thus be transported to any distance; while cuttings in July, (and buds are seldom mature enough for budding, before that time,) can with difficulty be preserved a few days. As soon as the sap rises freely in the spring, (say the middle of April,) you may commence budding with these winter cuttings, with as much success as at any other time of the year, which may be continued until June or July.—Budding is a neater and pleasanter operation than grafting, and this mode places them upon an equal footing with grafts in March; I continue the wrapping of coarse yarn on, seven or eight days, then head them down, and by the winter, the buds will have grown, (if the season proves favourable) two or three feet in length. I find it an injury to prune the bodies of standards too closely below the buds; the first season, the new bud cannot, (until it has attained same size,) imbibe and assimilate to itself all the sap that rises, which must, if all the conducting limbs are pruned off, stagnate and disorder both body and roots; will sometimes destroy the stock altogether, or make the body eventually, less than the top or budded part; merely shortening or cutting out too luxuriant shoots, I conceive best, the first summer. In my nursery, I prefer budding on the leading top shoot at the height of four or five feet, as soon as it is three eighths of an inch in diameter; at that height, the juncture of the two growths being more complete in such, than in those of larger growth. One man may bud three hundred in a day, and with an assistant to tie after him, twice that number; in this manner, of those which I bud myself, I do not loose five in the hundred.

Your obedient servant,

C. HARRISON.

N. B. I have only attempted budding apples and pears in this way, but have no doubt, it will succeed equally well, with stoned fruit.

* * *

FROM THE NEW ENGLAND FARMER.

Boston, Jan. 29, 1824.

SIR,—I am induced to request the publication of the following letter from T. A. Knight, Esq. President of the London Horticultural Society, as a just tribute to him for this repeated proof of his regard for this country, and his desire to communicate to us, some of the finest fruits, recently introduced into Europe. I had barely hinted to him, that I was apprehensive that some of those which he sent to us last spring would fail, and it will be seen that he has promptly offered to send out duplicates of them all the ensuing spring. The least we can do, in such a case, is to make known his liberality. I have distributed, in the course of the last summer, more than two hundred buds of those which he sent; and I have promised many scions the ensuing spring. Should the new parcel arrive safely, I hope to be able to give them a circulation as wide as the liberality of the donor could desire.

That part of his letter which speaks of an ear of sweet corn sent by me to him, has reference to a question lately discussed in Horticultural transactions, relative to the effect of the farina or pollen, of one variety of plants upon another of the same species; some of the writers contending, that a change is effected in the fruit in the same year by the interchange of the farina, while others maintain that the effect is only visible in the fruit raised from the seed in subsequent years. Mr. Knight has invariably maintained the latter opinion, in which I fully coincide. I sent him, however, an ear of our sweet corn, which I thought might be an exception.—The kernels of that corn, it is well known, are white and shrivelled; but on the ears which I sent, there were several kernels of plump, yellow corn. This explanation will enable the reader to understand this part of Mr. Knight's letter. It will be seen that he does not consider this an exception to the general rule, for the reasons that he states.

I am, Sir, respectfully, your humble servant,

JOHN LOWELL.

Downton, near Salop, Wales, Oct. 23, 1823.

MY DEAR SIR,—I am sorry to hear that the fruit trees I addressed to you, arrived in so ill a state. The value of them to me was very trifling, and I shall have much pleasure in sending other trees in the next spring, and till you are in possession of the different varieties, which I am satisfied you will find a great acquisition to your gardens and orchards. I should have written sooner to express my wishes to send you another box in the spring, but I have waited to receive a letter, which you proposed to send me, to say what varieties *had succeeded*, and what *had failed*. I still hope to receive such letter before the spring, that I may not send any thing, which you already possess. We have recently introduced a variety of apple from the north of Italy into the garden of the Horticultural Society, of which the Belgic as well as Italian gardeners speak in rupturous terms: and Gallesio, the author of a splendid publication of delineations of the Italian Fruits has placed this apple first, at the head of the list of Italian fruits.—And a Belgic gardener states its flesh to be as rich and melting as that of the finest pear. I have only obtained a few buds of it for insertion in the last season, but I propose sending a budded stock to you.

I thank you for the ear of Indian sweet corn which you were so kind as to send me. The facts you state are very interesting; but they do not present to my mind any thing anomalous.—The color of the *seed coats* in the blue and yellow grains is *not* changed. It is the matter which composes the cotyledons only, which acquires a tinge from the operation of the pollen.

An English gentleman, by the name of Goss, has pointed out, in the Horticultural transactions of the present year, a similar change in the color of the Prussian blue pea; a variety cultivated in our gardens, of which the color of the cotyledons is a dull blue, which is seen through a white skin Mr. Goss conceived erroneously, that he had changed the color of the seed coat; but I have, in a subsequent communication shown that he has drawn an erroneous inference; and that the seed coat of the pea, or of Indian sweet corn retains the same color, which it would have presented if its natural pollen, that of the plant itself, which afforded the seed, had alone been present. I planted a few of the white shrivelled seeds, taken from the ear you sent me, soon after it arrived, and I have kept each plant wholly separate from any other; and all the seeds (which have been some time perfectly ripe,) are white and shrivelled. You will probably think that I have been very expeditious in obtaining ripe seeds. But we do almost every thing here by machinery; and I have a couple of dry stoves, which are always kept at a very high temperature; and into those I introduced several plants in succession, as their periods of shewing blossoms approached, suffering one only to bear its male flowers at a time. I have of the plants, growing under glass, in a lower temperature: But those have not yet ripened their seeds. The sweet corn, in its immature state, must be, I conceive, a most admirable vegetable. I beg to assure you that I did not make the foregoing experiments under any doubts of your accuracy. On the contrary, I have given you full credit for perfect accuracy; and I think the habit of hearing from many correspondents, some of them certainly not accurate has given me a facility of distinguishing truth from falsehood in the statements and opinions of such correspondents. I have, in the present year, seen a great number of new seedling nectarines, obtained from experiments, purposely and scientifically made; and I have got one or two varieties of, I believe, unprecedented excellence. But your climate is, I believe, too hot for the melting varieties of the nectarine.

I remain, my dear Sir, sincerely yours,
T. A. KNIGHT.

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 20, 1824.

TO CORRESPONDENTS.

It appears that Dr. Cooper, now residing in South Carolina, has written a pamphlet against the policy of those who would augment the duties on a great variety of imported commodities, so high, as to ensure a profitable business to American capitalists, who might set up establishments for the manufacture of similar commodities in this country.—This pamphlet, or tract of Dr. Cooper's, has escaped our notice, and we have no reason to believe that it has appeared in any of the news papers, except the Richmond Enquirer—several numbers under the signature of Hamilton, written expressly in reply to Dr. Cooper, have been published *in most of the leading papers of the United States*—few if any of which, besides the Enquirer, ever published the doctors original essay, and although we have never read, much less published it, we have been requested to insert the answers to *it*, as a reply to the numbers of RURIS CONSULTUS; whose numbers appear as original in this paper.

Now we have made the foregoing statement, as a prelude to the following positions and remarks, whereby we desire, once again and for all to be understood to say—That,

1st. We are ready and glad to publish *original* essays, on the general principles, which should guide the country in prosecuting schemes of internal improvement—and on the question of giving legislative aid to particular branches of domestic industry—not because such essays will teach the farmer how best to harness his working cattle, or what crop he can most profitably cultivate—we publish such essays, because they tend *to enlighten the minds of young farmers, and to teach them how to understand, and to estimate their political rights, and the powers of the government on subjects which directly concern and bear upon the prosperity and the profits of their own vocation.* We suppose ourselves to be something like our patrons, and we would not have one of our own sons, to know merely how to make the most corn, or the most hay, at the least expense. It is true that to do *that*, requires experience and skill, which are not to be despised; but a farmer my possess these, and yet have little else that belongs to the dignity of a man. The history of the world admonishes us that men and governments, will always be found ready to filch the hard earnings of men, who are *ignorant of their rights*, or without the requisite spirit to sustain and defend them. Hence it is we say, that we feel it to be within the proper sphere of this journal, which be it remembered, aims to *improve the moral power*, as well as the practical habits of its patrons,—to publish, occasionally, original essays on the *politics of agriculture*. But we cannot afford, this being only a *weekly* paper, to *copy* numerous essays, which have already gone the rounds of daily papers, and that too, in reply to other articles, that we never saw or published, and this brings us to say,

2dly. That in publishing such original essays, we are always ready to *let both sides be heard*—we despise that prostitution of the press, committed by those who, while they profess to enlighten, speak only on one side, and practise fair dealing, by *suppressing all that is not agreeable to their own views.*

If therefore, the correspondent, who requested the insertion of Hamilton, in reply to Ruris Consultus, (although published in reply to a different writer, and before Ruris Consultus appeared,) will send an original answer, it shall be promptly inserted—"give us but light" say we, no matter what objects it may reveal, or to what conclusions it may lead.

Finally, we must repeat the wish, that this being only a weekly paper, and chiefly *practical*, abstract essays may be as much as possible *compressed.*

☞ Amongst other articles on file, and which will appear in our next, are several interesting communications, one—

On the "rubbing disorder" of cattle, as it is denominated in Tennessee, supposed to be the same, as that which destroyed some valuable cattle on the Eastern Shore of Maryland, last fall.

On the garden hoe, with an engraving.

On bread making.

Proceedings and constitution of an agricultural association at Jonesboro in Tennessee.

On Sulphate Quinine, &c. &c.

☞ The document on "DRY CULTURE" of rice is expected to prove entertaining to the general reader, and especially interesting to our numerous patrons in the south—it may also, says the valued correspondent, from whom we received it, be "made to subserve the benefit of a vast portion of the middle and western states."

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Wharf flour, $5 37½—Howard-street, do. $5 62½—Best family do. retail, $7—Wheat, red, $1 10—Corn, 35 cts.—Rye, 40 cts.—Oats, 28 to 30 cts.—Whiskey, 23 to 26—Butter, inspected, 10 to 15 cts.—Coal, Liverpool, bushel 40 to 45 cts.—Virginia, 28 cts.—Susquehannah, per ton $6 50 to $7—Rice, per cwt. $3 75 to $4—Beef, northern mess, per barrel $10—Cargo, No. 1, $8 to 8 50—do. No. 2, $6—Baltimore prime, $10—Bacon and hams, 10 to 11 cts.—Cotton, W. I. Island, 18 to 20 cts.—Louisiana, &c. 16 to 17 cts.—Georgia upland, 14 to 16 cts.—Alabama, 12 to 13 cts.—Candles, mould, 12 to 13 cts.—Dipt, 10 to 11 cts.—Spermaciti, 25—Feathers, live, 30 to 35 cts.—Fish, herrings, Susquehanna, $2 75—Fall mackarel, No. 1, to 3, $4 50 to $7—Shad, trimmed, $6 to 6 50—Flax seed, rough, per bushel, 70 to 75 cts.—cleaned, cask, $8—Flax, per lb. 10 to 11 cts.—Hemp, Russia, $175 ton,—Country dew rot, 7 cts. per lb.—do. water rot, 9 cts.—Hops, fresh, 35 cts. per lb.—Hides, dryed, 15 to 19 cts. per lb.—Hog's lard, 12 cts. per lb.—Lime, per bushel, 30 to 33 cts—Leather, soal, best, 24 to 27 cts. per lb.—do. Eastern tan, 18 to 20 cts.—Lumber, board measurement, cargo prices:—Of the following articles we give the yard prices.—Oak timber and scant. $1 to 1 25—Boards all sizes, $1 50 to 2—Pine scantling, do. $1 to 1 25—Boards 4-4, $1 to 1 25—White do. 5-4, $1 75 to 2 50—do. co. 4-4, $1 15 to 1 30—do. cl. 4-4, $1 80—Shingles, cyp. 18 in.—$3 to 3 50—Shingles, junip. 24 do. $7 50 to 7 75—jun. com. $3 50 to 5—Staves, W. O pipe, $40 to 45—do. hhd. $25—do bbl. $15 to 17—R. O. bbl. $15—do. hhd. $17—Wool, fleece, merino full blood, 35 to 40 cts. per lb.—Cropped, 28 to 30 cts.—Common country, 20 to 30 cts.—Skinner, 35 to 40 cts.—When assorted and cleaned, any of the above will obtain an advance of 15 to 20 cts.

Retail prices of provision market—Beef, prime pieces, 10 cts.—Veal, 8 cts.—Mutton, 6 to 7 cts.—Turkeys, 75 cts. to $1 25—Geese, 50 to 75 cts.—Ducks, Canvasbacks, $1 25 to 2—Red heads, 75 cts. to $1—Chickens per pair, 50 to 62½ cts.—Eggs, 15 to 18 cts.—Butter, 1st quality, 25 to 37½ cts.—Turnips, per bushel, 50 cts.—Potatoes, do. 50 cts.—Parsnips, do. 62½ cts.—Celery, 8 to 10 cts.—Carrots, 4 to 6 cts.—Cabbages, 2 cts. &c &c.

Prices of Robert Sinclair's, Wood's and Carey Ploughs.—No. 3. Woods' or Freeborns' $11—No. 2, do. do. $10—No. 1½, do. do. $8—No. 1A, do. do. $6 50—Corn, do. do. $6—No. 21, do. do. for seeding, $5, (Extra shares always on hand, at 37½ to 50 cts.) No. 3, Carey or Dagen, $6—No. 2, do. do. $5 50—No. 1, do. do. $5.

Premium and other barshare ploughs, is 10 per cent. lower than last year.

Liverpool Markets, January 6.

Cotton.—Comparatively little business has been done during the last week, the disposition for speculation having wholly subsided, and the demand from the trade having been very limited, so that the total sales have not exceeded 5400 bags. American descriptions barely maintained their currency, in which the transactions have been usually light. The following are the particulars; 600 Boweds at 7½*d* to 9¾*d*; 300 Orleans, 9*d* to 10½*d*; 820 Alabamas 7¾*d* to 8¾*d*; 70 Sea Islands, 13½*d* to 17*d*; 130 stained do. 9½*d* to 11¼*d*; 700 Pernams 11¼*d* to 11¾*d*; 520 Bahias, 10½*d* to 10¾*d*; 280 Maranhams 10 *d* to 11*d*; 150 Mina Novas, 10¼*d*; 30 Demarara 10¾*d* to 12*d*; 200 Egyptian 11*d* to 11¼*d*; 70 Carthagena 7 3 8*d* to 7½*d*; and 90 Surats at 5 2-3*d* to 6¼*d* per lb.

Tobacco.—The quality continues very limited, and we can only comprise in our weekly report the sale of 120 hhds.

Naval Stores—The sales of raw turpentine since our last report, (in which we omitted 2000 bbls. of fine at 13*s*. 3*d*. per cwt.) have been very trivial, nearly the whole in the importers' hands having been bought up, there remaining only about 200 bbls. the principal stock, say about 11,000 bbls being in the possession of the trade. The import last year was very abundant, amounting to 69,430 bbls. The supply of tar has fallen off 23 400 bbls. and as the increase in the stock since the preceding year is only 3,700 bbls. a considerable diminution in the consumption is exhibited.

London Markets—Tuesday, Jan. 6.

We continued to have a good demand last week for cotton, but less was done, through a difficulty of making purchases in India cotton on a par with the prices of the preceding week. The sales were about 1900 bales.

250 hhds. of ordinary Virginia tobacco, attempted at 3 1-8*d*. and about 100 hhds. ordinary leaf tobacco at 2 5-8*d* per lb. are the reported sales of last week.

CONTENTS OF THIS NUMBER.

POLITICAL ECONOMY, letter 3, and last—DRY CULTURE—REMARKS ON SOILS—GARLIC, HOW TO EXTIRPATE IT, from a practical and judicious farmer, and one of our most enlightened correspondents—GARLIC, contrivances for separating garlic from small grain—BUDDING—A letter from T. A. Knight, Esq. President of the London Horticultural Society, to John Lowell—Editor's notes to correspondents—Prices Current, &c. &c.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

AGRICULTURE.

DRY CULTURE.

Concluded from our last number.

While on the subject of the Pontifical States, it may not be uninteresting to make a few observations upon the Campagna di Roma and the Pontine marshes.

The Campagna di Roma is not, as one would be induced to suppose, a perfect plain. It is diversified with hills and vallies, plains and marshes, lakes and rivers. The most elevated points are Mont Albano, Monte Rosi, Mont Oreste and Monte Mario, all of which are situated from one to twenty miles from Rome. Besides these, there are many other elevations of inferior altitude. Between these elevations are situated vallies where the hills are much approximated and plains where they are more remote. The surface of the Campagna is particularly irregular to the east where it joins the chain of the Appenines—Its western portion where it borders upon the Mediterranean is less irregular, and for the most part composed of a low marshy soil, in which are situated considerable bodies of water called stagni, that communicate with the sea and are supplied by it. Numerous streams having their origin in the Mountains traverse the Campagna and empty themselves either directly into the Mediterranean or into the Tiber. They are generally sluggish in their course and their waters invariably coloured with the soil through which they pass. The venerable Tiber cannot be excepted from the remark.

> Non con onde liete e chiare
> Corre al mare,
> Passa torbido ed oscuro.—*Guidi.*

Its course is through a lime stone region from which it derives its yellow colour. The ancient poets, so accurate in their description of natural objects, call it the *Yellow* Tiber. There is perhaps no part of the globe that contains in the same space a greater number of lakes than the Campagna. They have no natural outlets for the discharge of their waters. The deep cavities in which they are situated are according to geologists craters of extinct volcanoes. Four of them are upon Mont Albano. The largest derives its name from that Mountain. A canal was made three hundred and ninety-three years before Christ, to drain off its water, which from its constant accumulation threatened an inundation of the surrounding country. This subterranean canal perforates the mountain and is more than a mile in length. It still serves the purpose for which it was originally intended. For this great work Rome is indebted to the oracle of Apollo at Delphi, which declared to the Romans the impossibility of conquering the Veii unless they drained this lake. Another of the lakes upon the same mountain, has a similar artificial outlet—the history of which has not been handed down. Besides these, there are seven or eight lakes in what is properly called the Campagna, independently of other similar small collections of water. Several of them have been drained, but the draining of the remainder is next to impracticable, except upon the plan of the ancients, and they still continue to exhale pestilential miasmata. The Solfatara, a lake whose sulphureous exhalations are perceived long before the traveller arrives at its shores, was drained in modern times, by the cardinal Hippolite d'Este. It is now much smaller than it was, and it is supposed that it will soon close up by reason of the depositions which are constantly forming on its banks. The Campagna is nearly destitute of trees, cultivated fields and houses. It presents on every side little else than waste and desolation. Scattered spots of cultivation, a few wretched houses which serve as taverns, ruined aqueducts, the remains of ancient towns, villas, temples and funeral monuments, are the only objects by which the eye can measure the wide expanse. Innkeepers, shepherds and their flocks, are now the only occupants of a once thickly inhabited country where Maecenas, Cicero, and Adrian were proud to build their villas.

> Tal nonfosti gia tu, quando vedesti
> I consoli aratori in campadoglio,
> E tra ruvidi fasci in umil soglio
> Seder mirasti dittatori agresti.—*Testi.*

To what are we to attribute the present degenerate state of the Campagna? Denina, and after him Chateauvieux, have attributed it to the destruction of property, and of the empire by the Northern Barbarians and the abolition of slavery by the introduction of christianity. In the time of the republic and the empire, the country was divided among a large number of owners, and slaves were the only husbandmen. At present the Campagna is in the possession of a few individuals, and the small quantity of land under cultivation is tilled by men who go there for that purpose from the Adriatic coast of Italy, and the Abruzzo—and who fall victims to the exhalations given out by the lakes, marshes, and the neglected soil. Pestilential air which was the effect of the ruin, is now by its reaction one of the causes of the present state of the Campagna. From the imperfect description which has been given of the environs of Rome, it cannot but be perceived that its situation is unhealthy. On every side of it, are vallies which serve as receptacles for water in the rainy seasons, muddy streams and lakes which exhale mephitical and sulphureous gasses—to the west are the marshes and stagni about the mouth of the Tiber, and to the south the Pontine marshes from which long continued southerly winds have conveyed pestilential exhalations even to Rome, as would appear from the following lines of Pliny, "Ob Putridas exhalatione, harum paludum, Ventum Syrophaenicum Romae summopere noxium volunt nonnulli." The ancient Romans guarded against the evils arising from the natural situation of their city by declaring the forests sacred, by cultivating the soil with slaves, by building country houses, and decorating them with gardens, by making numerous aqueducts, canals and roads, and by draining the lakes and marshes Religion, agriculture, the fine arts, and the sciences, at the same time that they embellished the country, purified the air and rendered it salubrious. The health of Rome, commanded the attention of her greatest, her best, nay even of her worst governors. The enterprising Appius, the magnificent Augustus, the cruel Tiberius, the virtuous Titus, and the benevolent Trajan, contributed alike to the promotion of public health, by the various internal improvements of which they were the authors; and Suetonius informs us that the untimely death of Julius Cæsar prevented the execution of the grand project which he entertained, of turning the course of the Tiber through the Pontine marshes in order to drain them more effectually. Before we leave this subject, a few observations upon the malaria fevers may not be misplaced. Malaria signifies literally bad air, and is the noxious principle which exhales from the low grounds, lakes, marshes and uncultivated soil of the Campagna; and causes the fevers of Rome and its vicinity.—These fevers vary from the mildest intermittents to the severest remittents. The prevailing type is the tertian. They are similar to the fevers of the lower country of Carolina and Georgia.—Those most obnoxious to them are strangers who consist chiefly of the inhabitants of the Adriatic coast of Italy, and who visit Rome and its environs in the summer and autumn for the purpose of harvesting the few crops of grain made upon the Campagna. Rainy seasons are most favourable to their production, particularly when the rains are followed by a long continued hot sun. Subjoined are the bills of mortality caused by the malaria fevers in the largest hospital (Santo Spirito) of Rome—during the autumnal seasons of 1818 and 1819—

1818 Received 8137, Died 363.
1819 " 6134, " 258.

The Pontine marshes commence a few miles south of Cisterna and extend for twenty-four miles to Terracina. They are from 6 to 12 miles broad. History informs us that the principal persons who have been conspicuous in their attempts to drain them were Appius Claudius Cœcus, in the time of the republic, Augustus and Trajan during the empire, Theodoric after the fall of the Empire, and the Popes Boniface VIII Martin V. Sixtus V. and Pius VI. in modern times; most of these attempts were successful in restoring the soil to agriculture and in purifying the air; but the immediate successors of those great men neglected the improvements which they had made and allowed the marshes to relapse into their original state. For their present improved condition, Italy is indebted to the late Pope Pius VI, and his engineer Rapini. A fine road 24 miles long and bordered with elm trees divides the marshes into nearly two equal parts. To the west of the road and close along side of it, is a navigable canal which receives the water of all the other canals which have been made to drain the marshes. This road occupies the site of the Apian way, some of the remains of which still exist; and the canal is the same as that upon which Horace embarked in his famous journey to Brundusium. Notwithstanding the vast efforts made by the late Pope to restore these marshes to agriculture, and to render the air salubrious, he did not fully succeed in either of his objects. That part of them situated to the east of the road is better drained than the other half, and contains a few fields of grain, but it is chiefly used as pasture land for immense droves of Buffaloes. To the west of the road are a few cultivated spots, but the greater part of it is still fenny, and in some places, particularly in the vicinity of the sea, the land is covered with stagnant water. The air of the marshes has been a good deal improved by their partial desiccation but their whole extent is still considered insalubrious, and so much so that the inhabitants living upon them are wretched looking objects, and those who labour in the fields and upon the canals retire at night to the neighbouring mountains and villages. The present Pope with the benevolence characteristic of him, is engaged in draining still further, by means of a canal, their eastern section. His paternal care aided by his liberal and enlightened minister, the cardinal Gonsalvi, will, I have no doubt, very much ameliorate the condition of this part of the Pontificial states. Notwithstanding that it is so imperfectly drained, it is already in part cultivated, and inhabited, and its air is become more salubrious. What then may we not anticipate as the result of the complete desiccation which the works now in progress and the plan, (if is adopted) of a French engineer, which consists of making parallels of canals and secondary ones at an angle of 45 degrees, are calculated to effectuate? With such assistance, a few active and enterprising farmers would soon change the face of this plain and restore it to that state, when according to Pliny, twenty-three cities and numerous villas were situated upon it and in its vicinity, and when in the year 352 of Rome, as Livy informs us, it was divided among the people for cultivation—"Quinquiveros Pomptino agro dividendo creaverunt." It must once therefore have been more salubrious than it is at present. Why may it not become so again? Let it be well drained, which is not physically impossible, for there is a declivity of seven feet, and the ancients must have had it dry in order to cultivate it and to people it with twenty-three cities. Let the land be divided among farmers and they will cultivate a soil naturally fertile. Restrict them to dry culture and they will make dams and ditches to keep the land dry. Canals upon the plan of the French, clean dams and free ditches, the surface of the soil covered with vegetation, fields bordered with trees as in Lombardy, well built houses, cattle to keep down the weeds of meadows, and other agricultural improvements, would purify the air and restore to this country the salubrity which it enjoyed in former ages.

5th. Rice was formerly much more extensively cultivated in the kingdom of Naples, than it is at present. Its cultivation is now pretty much restricted to Calabria and Sicily While Naples was in the possession of the French, its cultivation was prohibited in certain places, and in others it was regulated by the following conditions. 1st. The rice fields shall be watered by running water—2d. The petition requesting permission to open a rice field, must contain mention of the precise spot where the field is situated, the extent of the field, the body and the quantity of water that the cultivator proposes to employ—this petition must be posted up three weeks in the chief places of the canton, and an engineer appointed by the prefect shall repair and report as to the soil and situation at the expence of the petitioner. It is necessary to obtain permission as aforesaid, that the engineer reports that the spot can be appropriated to no other cultivation, that the inclination of the soil is sufficient to cause a constant and free circulation of water—that it is capable of being surrounded with a canal fit to receive all the water irrigation and to conduct it to a neighbouring stream—that the water shall be sufficient to keep the whole land constantly covered—that the rice field shall be situated at least 1500 feet from the nearest habitation—3000 feet from the nearest highway, and 12000 feet from the nearest village.

See Lyman's Pol. state of Italy.

• On the southern side of the Gulf of Salerno is an extensive plain in which the most remarkable objects are the ruins of the city of Pæstum.—This plain is low, fertile, and being well watered by the river Sele, is perfectly adapted to rice, which was formerly cultivated upon it, but owing to its bad effects upon the health of not only the inhabitants of the plain, but of those of the neighbouring towns—its cultivation was abandoned. The exhalations extended to the city of Salerno, which according to the information received from its inhabitants, has since become more heatthy, though its air is still considered insalubrious. The plain is now almost wholly uncultivated and uninhabited, and supports large herds of Buffaloes. Pæstum is inhabited by a few miserable families who act as Ciceroni, and live upon the charity of the curious who visit the ruins. I was informed by them (indeed their appearance was a sufficient evidence of the truth of what they asserted,) that the air of that place is pestilential during the summer and autumn, and that they were forced to take refuge in the neighbouring mountains so long as the warm weather lasts.

6th. It is a remarkable fact that pestilential diseases are neither so frequent nor so extensive or fatal in Europe as they were formerly. To what are we to attribute this amelioration of disease? To agriculture and other arts, and to civilization—or as Fodere has more eloquently expressed the same idea—"A la main bienfaisante de la philosophic qui a desseche' les marais, construit des chemins, bride des rivieres, enrichi la culture et multiplie les moyens de subsistance qui a porte le gout de la properté' et meme unecertaine aisance parmi toutes les classes." Philosophers thus account for the difference of the former, and the present state of Europe as regards the health of its inhabitants. Governors would attribute it to the magical influence of quarantine laws, and "Cordons Sanitaires."—The same happy result will in time be the consequence of the progress and perfection of agriculture, the increase of population, and the extension of civilization in America. Need we promise ourselves an amelioration of disease in Savannah? Has it not already taken place to a certain extent, through the happy influence of the Dry Culture system? All who observe well, testify to the fact. Already have we gained an important advantage over our invisible enemy, marsh miasma. Let us then occupy with firmness the ground we have won from its dominion. Let us pursue the system to its fullest extent, and not rest satisfied till we finally destroy, in imitation of Hercules, all of whose labours were for the benefit of mankind, the nine headed Hydra which infests the neighbourhood of our city Much of the public treasure has been expended, let us not permit posterity to say that it was squandered. Much more must yet be done to complete the system, let us not stop short in a career so auspiciously commenced. A great reward is before us, let us spare no expense, no exertions to obtain it.

Let us reflect, that we are now to set an example, by which countries whose topography is similar to our own, may profit—that we are now establishing a precedent by which future generations of men are to be guided.

Philanthropy calls upon us to be firm and industrious in this our *good work:* self interest dictates to us that the course we are pursuing, is the one best calculated to promote our prosperity and happiness. We are now justly the subject of admiration to all foreigners who are acquainted with the history of the Dry Culture system adopted by our city—a dereliction of our duty at this time would call forth their contempt, and cannot certainly raise us in our own estimation—

May you, Mr. Chairman, and your honorable committee, continue to pursue the system with all the zeal and firmness which become guardians of the public health. In the faithful execution of your duty you will be seconded by the council, by the best wishes and support of the citizens of Savannah, and by no individual with more fervour, than by, Sir, Your very humble ser'vt,

JAMES P. SCREVEN.

Communicated for the American Farmer.

"WASHINGTON AGRICULTURAL SOCIETY" OF EAST TENNESSEE.

Pursuant to public notice given, a numerous collection of the subscribers to articles of association for forming, an agricultural society for Washington and Carter counties, met in Jonesborough on Friday 16th January, 1824.

Thomas Emmerson, Esq. was called to the chair, and Nathaniel Kelsey, Esq. appointed secretary. The meeting being thus organized, the following constitution for the government of the society was proposed, and unanimously adopted.

Constitution of the Washington Agricultural Society.

Art. 1st. The Society shall be styled the Washington Agricultural Society.

Art. 2d. The Society shall consist of every upright individual friendly to its objects, who may have originally subscribed to the article of association, or may hereafter be elected by a majority of the members present at any meeting.

Art. 3d. The Society shall elect a President, a first and second Vice President, Corresponding and Recording Secretary, a Treasurer, a Committee of correspondence, consisting of nine members, any three of whom shall constitute a quorum for doing business—whose acts shall be registered, and communicated to the Society at any meeting by the Corresponding Secretary—a Committee of accounts, consisting of three members, whose duty it shall be to inspect and report annually upon the treasurer's accounts, and the state of the funds of the Society—to receive and adjust all claims against the Society for its contingent expenses, and to see that the Treasurer shall collect all dues to the Society from members and others.

Art. 4th. The Society shall meet regularly in the town of Jonesborough, on the first day of each county court, held in the months of April and October.

Art. 5th. Nine members at the least shall be required to constitute a quorum for the transaction of business, but any three members shall be sufficient to adjourn from day to day, until a quorum shall be formed at any time during the sessions of said court.

Art. 6th. All the officers of the Society shall be elected annually, on the first day of every autumnal stated meeting that a quorum shall be formed, and in the event of any vacancy, any meeting may elect, by a majority, a successor.

Art. 7. It shall be the duty of the president to preside at the meetings of the Society, and cause order to be observed, and continued attention to the business of the Society; during any session, in his absence, the first Vice President, and in his, the second shall preside and fulfill the duties of the president, and in the event of the absence of all these, a president pro-tempore shall be called to the chair by the members present.

Art. 8th. The Treasurer, Secretary, &c. shall fulfill the duties assigned to them according to the directions of the Society, and the import of their titles.

Art. 9th. The members of the Society shall be distinguished into honorary and ordinary members—all shall be ordinary members who have subscribed the articles of association for the formation of the Society, or may hereafter subscribe to them under permission of a majority of members present at any stated meetings. Honorary members shall be such distinguished citizens of this or any other state, as may be elected for their known patronage of agriculture or the other arts more immediately connected with its prosperity—and strangers who desire to be present may be introduced upon the recommendation of members during the proceedings of the Society—provided that no more shall be introduced than may conveniently be accommodated with room without incommoding the members.

Art. 10th. Every ordinary member shall pay one dollar annually into the Treasury of the Society.

Art. 11th. Any member of this Society may withdraw at any time by notice given to the Secretary, in writing, provided he shall first have paid all arrearages due to the Society.

Art 12th. The funds of the Society shall be appropriated by a majority of the members present at any stated meeting, to purposes only for promoting the interests and improvement of agriculture, and the benefit of the members.

Art. 13th. Donations may be received by the treasurer from any member of the Society, or any other individual; and shall be accounted for with the other funds of the Society.

Art. 14th. The proceedings of the Society for the purpose of order, shall be regulated by the rules for that purpose, which are observed by the General Assembly of this state.

Art. 15th. At any stated meeting any article in this constitution may be altered by two-thirds of the members present, or any new article added—provided that a majority present at the next stated meeting thereafter, shall approve the same.

Art. 16th. It shall be the duty of the Society to provide a system of by-laws for the government of the members and officers, not incompatible with this constitution.

Art. 17th. It shall be the duty of the committee of correspondence (selected for their distinguished talents and experience) to collect useful information in whatever relates to the promotion of the interests of agriculture, from every practicable source, and to disseminate information from the Society to the community generally, to determine upon what is useful to be published for the benefit of the Society and others, and to propose to the Society the consideration of any improvement in this constitution that their experience and observation may determine to be necessary; and the Corresponding Secretary, as the organ of this committee, shall record and report their proceedings, and be the immediate agent of their communication with the other societies, and individuals, as instructed by a quorum of the committee, which may be formed, and act at any time or place during the recess or session of the Society.

According to the provisions of the constitution, the meeting proceeded to the election of officers for the ensuing year, which resulted as follows:

Thomas G. Watkins, *President.*
Alfred M. Carter, 1*st. Vice President.*
John Kennedy, 2*d Vice President.*

Committee of Correspondence.

Thos. Emmerson, Esq.
John G. Eason,
Jacob Howard,
James Sevier,
James P. Taylor,
William B. Carter,
Montgomery Steuart,
Robert Reeve,
James McAlister.

O. B. Ross, *Corresponding Secretary.*
David A. Deaderick, *Recording Secretary.*

Committee of Accounts.

Samuel G. Chester,
William Mitchell,
Samuel Hunt.

Samuel Crawford, *Treasurer.*

Resolved, that this meeting do recommend the general attendance of the members, at the first constitutional stated meeting in April next.

Resolved, that the Corresponding Secretary, transmit the proceedings of this meeting, together with a copy of the constitution, for publication in the American Farmer, and American Economist.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

MARLE.

MR. SKINNER,

I find marl is becoming to be a subject of great inquiry, and is very generally growing upon the attention of the agricultural world. There is nothing which merits attention more, for in every instance where it has been applied it has been considered the most successful of all maoures. There was a writer in your paper (Mr. Ruffin) who gave us one of the most correct accounts of the operation of marle on lands that I have ever seen, and further views from the same pen would still lay the agricultural interest under greater obligations to him. What Mr. Ruffin there asserts of marle correcting the acid quality in lands has been found to be true by all who have used it; and besides, he might add, that it is a great cleanser of lands, which manures are generally not—it certainly destroys all the noxious growth which puts up in acid lands, oftentimes to the great injury of the crop; and to the sheep sorrel it is certain destruction.

All the marle I have seen in Maryland is shell marle, which lies in large beds or strata, and has been generally found near the margin of the banks of rivers or creeks—this, I presume, is because it has cost less labour to find it there than elsewhere; but I have no doubt that the same strata can be found in the interior, if it was diligently searched for. They are generally from three to six feet under the surface, and present considerable variety in appearance. Some are composed of common oyster shells alone, which are very different from what are called shell banks—others are composed of what are commonly called clam shells—others of clam shells, muscle shells, and a great variety of scollop shells—others of shells so decomposed that it is difficult to class them, and these last are often intermixed and discoloured with a sort of ferruginous substance—others again present you shells completely broken down to lime, intermixed with sand, which of itself makes a pretty strong cement; and indeed the varieties are not only numerous and singular, but often very beautiful. The comparative effects of these different kinds of marle have not been ascertained, as they are generally different on different farms, but all agree who have used them, that the first year's product in wheat is increased to more than half as much more, but that the second crop, from one marling, is oftener more than double than less than double—this is easily accounted for upon the supposition that the marle does not become so well incorporated with the earth upon the first as upon the second tillage—but if the marle was strewed on fallow land, and two extra harrowings were given it after strewing, there can be little doubt but the incorporation would take place, and the product be improved. I find my marle acts better upon wheat succeeding my corn, than upon naked fallow, where the marle was spread on both the same year; and I account for this result, so different from what is experienced from all other manures, from the frequent harrowings I give my corn during its cultivation; for I cultivate corn principally with the harrow, as being the cheapest, most expeditious, and best implement, and my lands are stiff soil.

None but those who have been eye witnesses to the effects of marle can believe them—they are truly wonderful—old worn out clay soils, that were literally good for nothing, have been regenerated by marle alone, and present the appearance of our best and natively rich lands—and there seems to be no end to the improvement—under one marling the product increases at each cultivation, and a second marling is followed by results proportionable to the first. Such is the conviction here as to the effects of marle, and the conviction arises from practical experience, that the discovery of a marle bank is supposed to double the value of the farm.

My principal object in making you this communication, is to endeavour to elicit Mr. Ruffin out upon this subject, whose experience, observation, and reasoning are far more satisfactory and useful than any thing I have ever met with.
AGRESTIS.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

SULPHATE OF QUININE.

Fashion has always had a power over the world from the earliest history of civilized life—in some things it seems almost reasonable, because it relieves society from a deadening uniformity, and gives life to new things—stirs up genius, and leads to improvement. But amid all the captives of whim, we should scarcely expect to see the Medical Faculty in the number; nevertheless they are found bowing to the all powerful goddess of fashion.

In proof of this I bring forth the article in question as their present hobby, viz: Sulphate of quinine, so much talked of, so much used, and so little known. I should have passed it over, and let it die in its own vials and pots, had it been confined to them, but alas! my cook has been cured of a chill or a sweat by it, and the fellow having attended three or four popular lectures on chemistry, is incessantly plagueing me to let him make an essential salt of beef,[*] he says it will be the true pabulum of life, and will make blood in half an hour after being swallowed, and flesh the first night; nay, he thinks that a pill of five grains taken three times a day will support the most robust constitution, and that we shall never hear more of dyspepsia, emaciation and a thousand other diseases, so that it will in a great measure reduce the doctor's bill in a family to a mere *line!* I have reasoned with him, and I fear in vain, my arguments I trust were not bad, they were as follows:—That beef would not bear condensing, and be *beef still*, further than by making good soups; that by bringing it down to an essential salt, we should confound beef with mutton, and fish with veal; the essential salts of each could be the same: nay, that great impositions would be practised upon us, and whilst we were flattering ourselves that we were eating stall fed beef, we might be eating the essential salt of a starved horse. That France would soon ship us the essential salt of frogs for the best Italian beef; and the Dutch, who are born chemists, would soon make a salt from sour krout, to imitate the appearance of best beef pills; I told him also of the portable soup of the last generation, but all in vain; this last article he called a gross one, and said he would take it to begin his pabulum vitæ with—moreover he has completely upset some of my arguments by telling me that every person knows enough of crytalography to distinguish salt petre from salt, and these from epsom and glauber salts, and that a very short period will do the same to these nice articles of cookery. I must, therefore yield for the present, fearing that he will go mad, if opposed, for he is very absent at times, and silent, except now and then, when entirely alone, he exclaims wo to the doctors; wo to the tavern keepers; and then flies into a passion with George the III. the Barbers, and P Pindar. To keep the poor fellow from actually losing his senses, I propose to eat my own dinners privately, and furnish him with three of his beef pills per diem, till he recovers. But passing over this striking parallel, let me seriously ask the worthy doctors of the fashion, if they recollect such a thing as the essential salt of bark, which had its run about thirty or forty years ago, and whether they suppose the addition of a little vitriolic acid at 12½ cts. per lb. could make such a tremendous difference in either price or quality, and if we are to be led away by every variation that can be made through all the long list of acids; if so, we, and especially the apothecaries, shall have more pleasure in prospect than a belle who expects to receive a whole year of London and Paris Fashions in one letter; indeed ours would last for a century; and lest I should not live to see the run of the whole race, I beg they would indulge me speedily with a pyrolignate of quinine; this I think would take the lead of the whole acidification; a man could not then putrify dead or alive—nay more; when we had used what we wanted, the residuum sticking to the paper would cure our beef and pork, or make leather. But I would beg to ask the learned doctors whether this sulphate of quinine cures by a quinine principle, or by what is common to all bitters? the latter is my humble opinion, and I see no good reason why we country doctors may not have a sulphate of cornine, (dogwood); a nitrate of lyriodendrine, (poplar); a muriate of salixine (willow); or a pyrolignate of amygdaline, (peach kernels); this last I verily believe would outdo the quinine, and as the bitter principle is of a poisonous nature when concentrated, if it should prove sluggish, we might help it with a few drops of Fowler's solution of arsenic, or with a mite of prussic acid.

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[*] *He calls it a "Holoraciate of Boine."*

"A COUNTRY DOCTOR."

* * *

NATURAL HISTORY.

(Continued from No. 46.)

Torpidity of Animals.—All the torpid animals retire to *a place of safety*, where, at a distance from their enemies, and protected as much as possible from the vicissitudes of temperature, they may sleep out, undisturbed, the destined period of their slumbers. The bat retires to the roof of gloomy caves, or to the old chimneys of uninhabited castles. The hedge-hog wraps itself up in those leaves of which it composes its nest, and remains at the bottom of the hedge, or under the covert of the furze, which screened it, during summer, from the scorching sun or the passing storm. The marmot and the hamster retire to their subterranean retreats, and when they feel the first approach of the torpid state, shut the passages to their habitations in such a manner, that it is more easy to dig up the earth any where else, than in such parts which they have thus fortified. The jumping mouse of Canada seems to prepare itself for its winter torpidity in a very curious manner, according to the communications of Major-General Davies, on the authority of a labourer. A specimen which was found in digging the foundation for a summer-house in a gentleman's garden about two miles from Quebec, in the latter end of May, 1787, was "enclosed in a ball of clay, about the size of a cricket ball, nearly an inch in thickness, perfectly smooth within, and about twenty inches under ground. The man who first discovered it, not knowing what it was, struck the ball with his spade, by which means it was broken to pieces, or the ball also would have been presented to me."

Much stress has been laid upon the *position* which these animals assume, previous to their becoming torpid, on the supposition that it contributes materially to produce the lethargy. In describing this position, Mr. Carlisle observes, "that this tribe of quadrupeds have the habit of rolling up their bodies into the form of a ball during ordinary sleep, and they invariably assume the same attitutude when in the torpid state: the limbs are all folded into the hollow made by the bending of the body; the clavicles, or first ribs, and the sternum are pressed against the fore part of the neck, so as to interrupt the flow of blood which supplies the head, and to compress the trachea: the abdominal viscera and the hinder limbs are pushed against the diaphragm, so as to interrupt its motions, and to impede the flow of blood, through the large vessels which penetrate it, and the longitudinal extension of the cavity of the thorax is entirely obstructed. Thus a confined circulation is carried on through the heart, probably adapted to the last weak actions of life, and to its gradual recommencement." But as none of these effects are supposed to be produced by the same position during ordinary sleep, their existence cannot be admitted in the case of torpidity. Professor Mangili of Pavia, with greater simplicity of language, says, that the marmot rolls itself up like a ball, having the nose applied contrary to the anus, with the teeth and eyes closed. He also informs us, that the hedgehog, when in a torpid state, in general reposes on the right side. The bat, however, during the period of its slumbers, prefers a very different posture. It suspends itself from the ceiling of the cave to which it retires, by means of its claws, and in this attitude outlives the winter. This is the natural position of the bat when at rest, or asleep. In short, little more can be said of the positions of all these torpid animals, than their correspondence with those which they assume during the periods of their ordinary repose.

It is also observable, that those animals which are of solitary habits during the summer season, as the hedgehog, and dormouse, are also solitary during the period of their winter torpidity; while the congregating social animals, as the marmot, the hamster, and the bat, spend the period of their torpidity, as well as the ordinary terms of repose, collected together in families or groups.

It is generally observed, that animals, previous to their torpidity, have their bodies charged with fat. In the marmot and some others, there are two peritonial processes, which may be considered as lateral omenta, and which, as well as the great omentum, are filled with fat. In the dormouse, however, and others, these lateral processes do not exist, the fat being more generally distrbuted. This store of nourishment enables the animals to support that gradual waste which takes place during the period of their slumbers. By some it has ever been regarded as the cause of their lethargy. Spallanzani, however, found, among the dormice procured for his experiments, a considerable difference among the individuals in regard to fatness, yet all were equally disposed to become torpid on the application of cold.

Many of those animals, particularly such as belong to the great natural family of *gnawers*, make provision in their retreats, during the harvest months. The marmot, it is true, lays up no stock of food; but the hamsters fill their storehouses with all sort of grain, on which they are supposed to feed, until the cold becomes sufficiently intense to induce torpidity. The *Gricetus glis*, or migratory hamster of Pallas, also lays up a stock of provision. And it is probable that this animal partakes of its store of food, not only previous to torpidity, but also during the short intervals of reviviscence, which it enjoys during the season of lethargy. The same remark is equally applicable to the dormouse.

Having thus made choice of situations where they are protected from sudden alterations of temperature, and having assumed a position similar to that of their ordinary repose, these hybernating animals fall into that state of insensibility to external objects, which we are now to examine more minutely. In this torpid state they suffer a diminution of temperature; their respiration and circulation become languid; their irritability decreases in energy; and they suffer a loss of weight.

(To be continued.)

* * *

FROM THE RALEIGH STAR.

Letter from John F. Smith, Esq. of Newbern, to the Editors of the Star, dated June 26th, 1811.

"In compliance with the request contained in your letter, received by Mr. Allen, I now transmit such information as I possess relative to the subjects of your enquiry.

The year before last I sowed a small patch in benni, which did not produce to my expectations, owing, I presume, to my then ignorance of the proper methods of cultivating the plant and saving the seed. Four bushels of this seed I ground in a mill with iron cylinders, and expressed without any application of heat, which yielded six quarts of oil to the bushel. The appearance of the oil is very fine, and all who have used it in diet, give it a decided preference to olive oil, among whom are Judge Taylor and Mr. Gaston, whom you will see at the Supreme court; and to them I refer you for further information of its merits. The cake, after the oil is expressed, mixed with other meal or flour makes a palatable nutritious and wholesome bread. I have discontinued the cultivation of the benni, because the oil is yet too little known to be in much demand, and the castor oil affords a certainty of profit: but I have no doubt the cultivation of benni and the manufacture of the oil might be made profitable, and think it will, in time, supercede the use of sweet oil in this country, and become even an article of considerable export. Of the Chinese old raddish, I have no experience—The apparent difficulty of cleaning the seed prevented any attempt being made to extract the oil.

There are five species of the palma christi known here—two only of which are profitable; the others being difficult to clean. It should be planted early in March, in the same manner as corn, and requires much the same tillage. The seed should be wet, and planted in hills, and not in holes, the plant having a long tap root: a good soil will produce fifteen bushels to the acre. The trusses, as they mature, must be cut and exposed to the action of the sun a few days, in which time the seed will dislodge themselves from their outer covering. One gallon and three-fourth's of cold pressed oil may be obtained from a bushel, and by the application of heat afterwards, the cake will produce more of an inferior quality. I have sent considerable quantities to New York, where it is greatly preferred to the West India oil. Its superiority over the latter consists in its requiring much less for a dose, being more pleasant to the taste, not nauseating and being less liable to produce pain. I have a letter from Dr. Osborn to this effect. Mr. Joseph Tagert of Philadelphia has lately sent an order for some for his own particular use, and a gentleman of Fayetteville, who had some of it last year is so much pleased with it that he has now ordered a hundred bottles.

Should you or any of your friends collect any Benni or Chinese raddish seed, in quantity not less than a bushel, I will, if it is desired, have the oil extracted from it.

TO THE EDITOR OF THE AMERICAN FARMER.

ON THE "RUBBING DISORDER" IN CATTLE.

Franklin, Missouri, Dec. 19th, 1823.

Sir,—I have seen, in a late number of the National Intelligencer, some account of a disease which had made its appearance among the cattle in Maryland, for the first time, last fall. From the symptoms which you have enumerated, as accompanying and evidencing this, which as far as I have known it, incurable disease, it is very similar, if not the same, which I have occasionally witnessed the ravages of, amongst the cattle of Tennessee, some eight or ten years past. About four years last past, I have lived in the State of Missouri, where this disease has never appeared to my knowledge.

In the State of Tennessee, it was usually denominated the rubbing distemper, because the cattle when attacked, would rub their heads and necks against the trees and other firm objects, until their horns would sometimes drop off, or their eyes be rubbed out of their heads—sometimes the cattle would die, before they were carried to such heights by the itching of their skins.

Causes—as far as my observations have led to any conclusion: *Scant* pasturage in the latter part of the summer, and suddenly overloading their stomachs in the fall by being turned into fresh cornstalk fields. This phrase will perhaps be unintelligible to you, but it is generally used in the western countries, to convey the idea of fields from which Indian corn has been lately taken, when a great portion of the stalks abound with saccarine juices, and particularly in the joints near the ground.

When cattle that have lived upon but scant forage for some time, are turned upon pastures of the above description, they fill themselves so full of this rich food, that they are incapable of digesting it. I hence conclude, that as the secreducts are clogged and incapable of action, the excretory ones convey all or most of the humors of the system to the skin; this produces the itching, &c. I am not sufficiently acquainted with physiology, to say how any organ of the system of animals should act so as to entitle it to the appellation of a healthful or morbid action, but I here express myself in such a manner as I presume will convey to you my meaning.

This distemper is not contagious, as I believe, though I have known eight or ten die of it on one plantation, and all nearly about the same time, and always in the fall of the year

I have never examined one of the victims of this distemper after its death, but have been told by those who have suffered considerably by this malady, that upon dissection, the contents of the paunch are found to be as dry as ashes.

I am of opinion that this distemper is most apt to appear in those seasons, in which the frost falls earliest. If so, this fact will farther corroborate my supposition of its cause.—For the juices of vegetables are concentrated more, and prevented from evaporation longer, by frost, than they would be without it. My practice is to keep my cattle out of my fields until the ground becomes frozen, not for the purpose of preventing this disease alone, but for the double purpose of keeping my grounds loose, and preventing the disease, if it should depend upon the causes thus guessed at The result has been equal to my anticipations.

It would be worth the trouble to enquire of your neighbours, whether the facts which have fallen under their observation correspond with my opinions or not. It will at least lead the way to the discovery of the true cause in time.

Your's respectfully.
JOHN HARDEMAN.

* * *

TO THE EDITOR OF THE AMERICAN FARMER.

GARDEN PLOUGH.

Bee Hive, Feb. 3, 1824.

Dear Sir,

In No 40, of the present volume, you request some instructions about the garden plough—always desirous of aiding you with my mite of information, I now enclose you a sketch of one, rough, it is true, as I have neither a plough by me, or my protracting instruments to scale with; but plain enough, I hope, to enable your ingenious mechanics to make by. The idea was taken from Knight's turnip drill, and it is a useful little instrument in light soils.

Fig. 1.

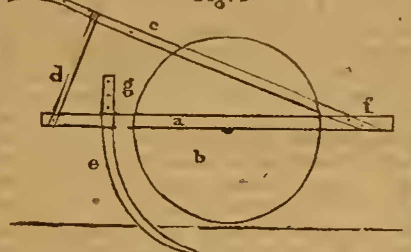

Fig. 2.

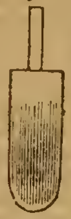

Fig. 1. *a*, A piece of plank, 2 inches thick, 8 wide, and about 32 long.

b. A wheel usually of plank. 1½ inch. thick, 12 to 15 in. diameter.

c. A pair of light handles, nailed to the beam, at *f*, and braced behind by a couple of light stanchions *d*, and pins between them in the usual way.

e. A thin light shovel plough, about 3 in. wide, fastened to the beam above, by a key passing through two staples, in it, and one of the eyes in the shank *g*. which are at different distances to regulate the depth.

Fig. 2. A front view of the shovel.

Should you not be fortunate in getting a better sketch, and description, I hope this may prove acceptable to you.

I remain, Sir, respectfully,
Your obedient servant,
W. S. GIBBS.

* * *

ON BREAD MAKING.

Mr. Skinner,

In perusing Simond's Switzerland, I met with the following plan for kneading and raising bread, which being simple in its construction may be tried with little expense should it answer, it will certainly be a useful article to the housewife.

Your's, &c. W.

"A deal box two feet long, one foot high, and one wide, turning by means of a crank on its axle, secured at the two ends (not passing through the box;) one side opens on hinges; the inside is divided by means of one or two moveable partitions for different sorts of bread at one time. The lump of dough is thrown in, and the crank turned in the manner of a coffee roaster. No bars, or any thing inside. A hissing noise occasioned by the carbonic gas escaping, indicates the working of the dough: and in about a half hour, (less in warm weather) it is fit for the oven. The fault, if any, is, that the bread is too much raised."

* * *

FROM THE CONNECTICUT JOURNAL.

TO FARMERS.

The season promises a very great crop of grass with more than usual proportion of white clover, which flowers abundantly. It is very desirable that the farmers in New England should use the opportunity which is near at hand, of securing a good suply of the seed of this very valuable grass, which for many purposes excels all the other grasses.

Pasture grounds well stocked with white clover yield more nutriment for cattle and sheep per acre, than any other, and cows fed on white clover give milk of a superior quality. Besides affording the best pasturage in the world, the white clover may be cultivated to advantage for hay. White clover and herds' grass sown on rich land, make a thick bottom, and the crop of hay will be more valuable than the crop from the same land sown with red clover and herds' grass.

Besides the advantages above mentioned to be derived from the culture of white clover, it has another excellence of no small importance to the farmer. The sward of turf formed by white clover is always tender and easily ploughed or broken up, and all kinds of grain and corn flourishes wonderfully well after this grass.

As white clover is what some would call natural to this country, that is, as it will after a few years get into land used for pasturing, the farmers have generally suffered it to grow, but have not saved the seed. This is a very great errour. When land is laid down for pasturing and sowed with other grass, it generally happens that the grass seed does not spring well, and the weeds spring up and occupy the ground a year or two before it is covered with white clover, whereas if the seed is sown, it will produce twice the quantity of feed. The best time for sowing white clover is in the fall with winter grain, but it will do well sown in the spring, and if by reason of drought it does not spring the first season, it will the next, as the seed is of a very imperishable nature.

The seed is collected by an instrument in form of a rake with long sharp teeth set so near together as to let the flower stalks of the clover slip in between them, but not to allow the heads to pass. These will be broken off and collected on the upper side of the rake, and may be removed from time to time, as the rake gets full. When the heads are collected these should be put into a dry place, and when thoroughly dried, they may be threshed on a clean dry floor, and the chaff winnowed out.

The seed when clean is worth half a dollar a quart, or $16 a bushel. The instrument for collecting will cost but little, and children can do the work, which may be done to very great profit.

* * *

FASCINATING POWER OF SNAKES.

The idea that snakes possess the power of charming birds, has been, we know, exploded by many, as one of those idle tales, which are ever found where the light of science has not penetrated. But we confess ourselves to belong to that school of philosophy, which is controlled by facts and which sacrifices any theory at their command. We have had access to facts on this subject, by which we are constrained to believe, that some kinds of serpents do possess the power of affecting not only birds, but men, in a powerful manner, apparently, by looking at them merely; certainly without touching them. The following statement, from the Salem Register, has occasioned the preceding remarks.

"A very singular fact occurred at Manchester a few days since. As Mr. Samuel Cheever was at work in the field, his attention was arrested at the sight of a number of dung hill fowls with heads erect and wings extended, standing in a circular manner. On going near to ascertain the cause, he saw a large black snake of 5 feet in length, within the circle, and his squamish head elevated 8 or 9 inches above the surface of the earth, while his other parts remained in a spiral form. And so complete was the fascination that Mr. C. was under the necessity of getting a pole to disperse the fowls, in order to kill the snake, in which he happily succeeded."

Among the facts to which we have had access, as mentioned above, are the following, which were communicated to us in such a manner, and upon such authority, that we would believe them, though the whole tribe of naturalists should laugh at us "till doomsday." A very near connexion of ours, a man who could not easily be deluded or imposed upon, was at labor with others, in a field. A few yards ahead of him, he discovered at the foot of a hill of corn, what to his eyes appeared the most fascinating object he had ever beheld. The colours seemed to combine every thing rich and beautiful. He walked forward to grasp the prize, but was seized by the arm by a friend, at the very moment he was about to clasp in his hands a large copper head, coiled up in the position for striking its victim!

The other fact was this: A man in New Haven county, now no more, but who was known to us, discovered a large rattle snake. He had heard stories of the fascinating power of snakes, and being a sceptic resolved upon an experiment. For this purpose, and to guard against danger, he provided himself with a goodly sized club, and stopped to gaze upon the poisonous reptile.—Presently the object of his aversion and even dread, appeared transformed to something too beautiful for description. Admiring its ever-varying and gaudy hues, resembling the rays of the sun glancing upon emeralds, and liquid gold, he unconsciously drew nigh it, until his reason admonished him of his danger. He could not, even then, raise his arm to strike the lovely object, which had, as it were, enchanted him.—But not altogether unconscious of his danger, he was compelled to shut his eyes to strike; when a single blow dissolved the spell cast over his senses by the venemous charmer, and he was no longer reluctant to "bruize the serpent's head."

[*N. Y. Com. Adv.*

Extract from the Memoirs of the Wernerian Natural History Society, vol 4.

The following narrative is taken from the Calcutta Journal, Nov. 1, 1821.—Case of William Kingston, born without arms or hands. I went to Ditcheat, and got him to breakfast with me at Mr. Goodfellows. He highly entertained us by putting his naked feet upon the table as he sat, and carrying his tea and toast between his great and second toe to his mouth with as much facility as if his foot had been a hand, and his toes fingers. I put half a sheet of paper upon the floor, with a pen and inkhorn. He threw off his shoes as he sat, took the inkhorn in the toes of his left foot, and held the pen in those of the right.—He then wrote three lines, as well as most ordinary writers, and as swiftly. He writes all his own bills and other accounts. He then showed us how he shaved himself with his razor in his toes; and he can curl his own hair. He can dress and undress himself, except buttoning his clothes. He feeds himself, and can bring both his meat and broth to his mouth by holding the fork or spoon in his toes. He cleans his own shoes and can clean the knives, light the fire and do almost any other domestic business, well as any other man. He can make hen coops. He is a farmer by occupation. He can milk his cows with his toes; and cuts his own hay, binds it up in bundles, and carries it about the field for his cattle, and last week he had eight heifers constantly to fodder. This last summer he made all his own hay ricks. He can do all his business of the hayfield (except mowing) as fast and as well with his feet as others can do with rakes and forks. He goes to the field and catches his horse; he saddles and bridles him with his teeth and toes. If he has a sheep among his flock that ails any thing, he can separate it from the rest and drive it into a corner, where no body else can; he then examines it, and applies a remedy to it. He is so strong in his teeth that he can lift ten pecks of beans with them. He can throw a great sledge hammer as far with his feet as other men can do with their hands. In a word, he can nearly do as much without, as others can with their arms.—He began the world with a hen and chickens; with the profit on them he purchased an ewe; the sale of these procured a ragged colt (as he termed it) and a sheep; and he now occupies a small farm.

There is at present (December 1822,) in Belfast, an ingenious young man named Roger Branaugh, who was born without arms, and is of course devoid of hands, which may be justly classed amongst the most useful members of the human frame. His feet, however, serve him in their place, and enable him to perform various operations, for which, at first view, he would appear wholly incapacitated. He has been seen opening out, with his toes, a closed penknife, with which he trimmed a quill, and made an excellent pen, in a very short space of time.—He can write rapidly and distinctly, his small letters being well formed, and his capitals cut with taste and ease. It is surprising with what expedition he can thread needles, and even tie a knot at the end of the thread with nearly as much facility as the most practised sempstress. He can darn his own stockings, and twist the thread or worsted line which he uses for that purpose to the proper degree of thickness. Branaugh can row in a boat with singular energy, though it must be confessed his attitudes are more unique than graceful. On such occasions, he leans his back against the stern, and one foot on one of the seats, so as to keep the oar, which he propels with the other, in due position. With boys he can play at marbles, and clear the ring with remarkable skill, his big toe bulking, as the phrase is, his taw to the mark with the precision of an air gun. He can convey his food to his mouth with his toes, and is by no means deficient as a carver. Neither is he a timid equestrian, but can even drive a cart or a carriage.—The reins on such occasions are placed round his body, and by moving to and fro, to the right or to the left, he so varies their position as to affect the horse's mouth and direct his motions. This ingenious poor man makes his livelihood by running errands.

NEW TARIFF.

A writer, in the New York Gazette, gives the following illustration, of the deceptious features of the Tariff bill, and of its oppressive character, in the duties on low woollens, to the labouring class of the community, who will be the principal consumers of these articles.

[*Salem Observer.*

"A piece of flannel, original cost, 27*s.* sterling, 46 yards long, 26 inches wide, would contain 33 square yards at the price established by the Tariff; 46 cents per yard, is $13 20, at 30 per cent. ad valorem, is $3 96 duty, which is 66 per cent. duty on the original cost.

"A piece of baize, 30 yards long, 42 inches wide, original cost, 15*d.* per yard, is £1 17*s.* 6*d.* or $8 33—contains 35 square yards, at 40 cents is $14—at 30 per cent. ad valorem, is duty $4 20 or 50 per cent. duty.

"A piece of tow cloth, 30 yards long, 44 inches wide, original cost 2*s.* 6*d.* per yard, is £3 2*s.* 6*d* or $13 88—contains 30½ square yards, at 80 cents per yard, is $24 40, at 30 per cent. ad valorem, is duty $7 32, or 53 per cent. ad valorem duty.

"A piece of plains, (which is almost altogether the clothing of sailors) 30 yards long, 26 inches wide, original cost at 10*d.* per yard, is £1 5*s.* or $5 55—contains 21½ yards square, at 80 cents per yard, is $17 20, at 30 per cent. ad valorem, is duty $5 16, or 93 per cent. duty."

At a special meeting of the CHAMBER OF COMMERCE, New York, on Monday evening, 26th January, to take into consideration the proposed Tariff now before Congress, the following resolutions were adopted and ordered to be published.

Resolved, As the sense of this Chamber, that the true and legitimate object of taxation is revenue, and that the power to lay and collect taxes and establish imposts, which is given to Congress by the Constitution of the United States, was not granted with the intention, nor will it bear the construction, that it may be so exercised as to *cherish and elevate one class at the expense of all the other classes of our citizens.*

Resolved, That the bill now before the House of Representatives of the United States, for altering the Tariff of duties, will, if it should become a law, be attended with the most pernicious consequences to the commerce, navigation, and agriculture of the United States; that the increased duties which it proposes will operate as prohibitions and restrictions on trade—will promote exclusive interest at the National expense—will impair the revenue, and will, in direct repugnance to the equal and benign principles of our political institutions, impose heavy burdens on the great body of our citizens, and give to a small number the advantages of an oppressive monopoly.

Resolved, That the duty proposed on the raw materials, iron, hemp and wool, is so great as to be almost prohibitory—that it is calculated to delude the agricultural interest to support a measure which will enhance the price of winter clothing to every laboring man in the community—to increase the expense of almost every implement for farming, and every machine for manufacturing: and the cost of every ship or vessel in our extended inland, coasting and foreign commerce.

Improved mode of carrying out anchors in ship's boats.

An elegant model of a boat, on a peculiar construction, to effect this purpose with much more ease and safety than has hitherto been accomplished by *larger* boats by the ordinary method, has been some time in our possession; and on account of its properties shall be laid before the public next week, while the highly finished model, with anchor, cable, &c. will be placed at our office for the inspection of merchants and commanders or vessels. The plan has been tried, highly approved of, and adopted by several of his Majesty's finest vessels; and testimonials of its excellence, from the commanders, addressed to the ingenious and able inventor, a worthy marine architect of Woolwich, are in our possession. [*Liverpool Mercury.*

Medical qualities of Oysters in Fevers and Consumptions.

Oysters are a mild, balsamic and cooling article of food, and are of the utmost benefit to those who are troubled with warm flushings of the face, and other feverish symptoms, usually felt in declines, and in nervous and irritable constitutions. It is quite possible, indeed, by making them a principal part of a meal, to prevent, in a great measure, the irritation and heat which produces the hacking and distressful cough in the more advanced stage of consumption. Oysters, indeed, and other mild nourishing food, will often altogether prevent consumption in those who are disposed to it from hereditary causes.

A young lady, of very narrow chest, and slender consumptive make, whose mother and two sisters died of declines—by avoiding beef, mutton, pork, and all sorts of red meat, and confining herself wholly to a diet of oysters, and other shell fish, while they were in season, and to boiled chickens and other white meats, with biscuits instead of bread, and rice instead of vegetables, soon became healthy and active, and escaped for many year's the dangerous decline which threatened her. It is to be remarked, however, that oysters, when too copiously eaten, are too cold for very weak stomachs, unless accompanied with good pepper, or cayenne.—Vinegar ought never to be used by those who eat oysters "to enrich their blood," or to prevent consumptions. Instead of vinegar a very little white wine may be added; but not when there is a fever or cough. When too many oysters have been incautiously eaten, and are felt lying cold and heavy on the stomach, we have an infallible and immediate remedy in hot milk, of which half a pint may be drank, and it will quickly dissolve the oysters into a bland, creamy jelly. Weak and consumptive persons should always take this after their meal of oysters.

METHOD OF PRESERVING FRUIT WITHOUT SUGAR.

By T. Saddington.—Trans. Soc. of Arts, vol. 26.

The expense of sugar is frequently urged as a reason for not preserving fruits, and to this may be added the uncertainty of success from the strong fermentable qualities of many fruits. They may be preserved for a length of time without sugar, by baking or boiling, and then closely stopping them up; but if the cork become dry, the atmospheric air exchanges place with what is impregnated by the fruit, which then soon becomes mouldy: but fruits may be preserved in good condition by the following process, for two years, or for a longer time, even in hot climates; as some that were done in 1806, have been exposed in an upper room to the sun during the whole of the summer, without injury.

The fruit being clean picked, and not too ripe, is to be put into wine or porter bottles, as they are cheaper than gooseberry bottles, and more easily obtained. The bottles must be filled as full as they can be packed, and corks being stuck lightly into them, they are to be placed upright in a kettle of water, and heated gradually to about 160° or 170° of Fahrenheit; that is to say, until the water feels very hot to the finger, but does not scald. This degree of heat is to be kept up for half an hour, and then the bottles being taken out one by one, they are to be filled up to within an inch of the cork with boiling water, the cork fitted very close and tight, and the bottle laid on its side, that the cork be kept moist. To prevent fermentation and mould, the bottles are to be turned once or twice a week, for the first week or two, and once or twice a month afterwards.

When applied to use, some of the liquor first poured off serves to put into pies, &c. instead of water, and the remainder being boiled up with a little sugar, will make a rich and agreeable syrup.

The fruit ought not to be cracked by the heat. They may be picked out of the bottles with a bent wire or iron skewer.

APPLE JELLY.

Peel and quarter a half bushel of white pippin apples, and throw them into cold water to prevent their becoming dark coloured. When all are done, put them into boiling water, and let them remain in it, until they are entirely stewed. Then pass the water and apples through a sieve, or flannel; then proceed in making the jelly in the same manner as with currants. The juice of a lemon must be put into the syrup. The peelings of the lemon must be cooked separately, with loaf sugar, and put into the jelly when finished.

TOMATOE, OR LOVE APPLE CATSUP.

Slice the apples thin, and over every layer sprinkle a little salt; cover them, and let them lie twenty-four hours; then beat them well, and simmer them half an hour in a bell-metal kettle; add mace and allspice, strain through a sieve, and simmer again. When cold, add two cloves of shallotts cut small, and half a gill of brandy to each bottle, which must be corked tight, and kept in a cool place.

MUTTON HAMS.

Mix two ounces of brown sugar with an ounce of fine bay salt, and half a table spoonful of salt petre; rub the ham therewith, and lay it in a deep dish; baste and turn it twice a day for three days; throw away the pickle which in this time will have drained from the ham, and wipe it dry. Rub it again with the same mixture of sugar, &c. one day, and baste it the next, for ten days, turning it every day. Smoke for ten days, (with green hickory, if possible.) The hams are best eaten cold.

GINGER WINE.

To sixteen quarts of water, add one pound of ginger bruised, (not powdered,) infuse it in boiling water, put it into a large jar, and let it stand 48 hours by the side of the fire; strain off into a cask, and add to it eight pounds of loaf sugar, seven quarts of brandy, the juice of twelve lemons, and of twelve bitter oranges; peel the skins of them very thin, which put into the spirits, the night before, and pour the spirits off the skins, when you put it into the cask. Cork up the cask for three or four weeks till the liquor is fine, and shake the cask for the first week to dissolve the sugar: a very small quantity of isinglass helps to fine it.

CURRANT WINE.

Fifty-five pounds of currants, produced four and a half gallons of juice; this was put into a ten gallon keg, and 20 lbs. of sugar added, and then filled with water: as the liquor decreased by fermenting, and running over the bung, the deficiency was supplied by water: three pints of brandy were added. Well distilled apple brandy answers perfectly well. Light coloured brown sugar, or clean Havanna sugar, should be used.

To make strong or bookbinders paste.—Mix wheaten flour first in cold water, then boil it till it be of a glutinous consistence; this makes common paste. When you wish it to be of a stronger nature, mix a fourth, fifth or sixth of the weight of the flour, of powdered allum; and where it is wanted of a still more tenacious quality, add a little powdered resin.

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Magruder's Inspection Warehouse, during the quarter commencing on the first Monday in January, eighteen hundred and twenty-three, and ending on the first Monday in April, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	17			17
Number delivered.	73			73

NAYLOR & WILSON, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Feb. 16, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Magruder's Inspection Warehouse, during the quarter, commencing on the first Monday in April, eighteen hundred and twenty-three, and ending on the first Monday in July, eighteen hundred and twenty-three.

	Domestic growth	Growth not of this state.	Re-inspected.	Total.
Number inspected.	50			50
Number delivered.	79			79

NAYLOR & WILSON, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Feb. 16, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

A report of the tobacco inspected at and delivered from Magruder's Inspection Warehouse, during the quarter, commencing the first Monday in July, eighteen hundred and twenty-three, and ending the first day of October, eighteen hundred and twenty-three.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	370			370
Number delivered.	299			299

NAYLOR & WILSON, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Feb. 16, 1824.

True Copy from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

IRON CARRIAGE WHEELS.

C. Hoxie, of the city of Hudson, has been engaged a number of years in making an improvement in carriage wheels; which consists in the rims and spokes being made of wrought iron, and the hub of cast iron. These wheels are so put together, that it is impossible for a spoke to get loose; of course they are strong and very durable, the weight about the same as those made of wood, and all the centre part of 50 of those wheels may be completed in 15 minutes.

The inventor being desirous of having them generally introduced, invites the attention of furnace companies, manufacturers of iron, and such as may feel disposed to purchase a privilege for making those wheels. There can be no doubt but such an establishment would be lucrative to the owners, and beneficial to the public, as also an article of extensive exportation. It is believed that but a few years will roll away, before wooden wheels, for carriages of every description, will be rolled out of existence. All stages ought to be furnished with iron wheels, having the rims plated with steel, especially in the winter, on account of the safety of passengers.—*Northern Whig.*

REFINEMENT.

It is amusing to observe how little cleanliness and comfort the Romans enjoyed, with all their wealth and power, and ingenious luxury. Many things with which our Alms Houses are supplied, were wanting in the imperial palace of Rome. To give one instance for many; forks were utterly unknown to them; nor were they used in Europe until Henry IV. of France, somewhere in the sixteenth century, discovered that they were for certain purposes, quite as convenient as fingers. The first fork used in Christendom, a great steel thing, one prong of which would make ten forks of these degenerate days, is now or was lately in the Castle of Pau.

TEA.

This shrub is propagated by seeds, which are sown in holes three or four inches deep. Nothing is used but the leaves. It bears great plenty at three years of age, but fewer at seven. It is then cut down to the stem and shoots out sprigs, every one of which bears nearly as many leaves as a whole shrub. It is cultivated in most provinces of China; but is not equally good every where, though they are always careful to place it in a southern aspect, and in valleys. That which grows in stony ground is far preferable to what grows in a light soil; but the worst sort is that which is produced in a clayish ground; but its different degree of perfection is more owing to the season in which it is gathered, than to the difference of soil. The first crop is gathered in March, when the leaves are small and delicate, and this is called *imperial* tea, because it is chiefly reserved for the use of the court, and people of fashion. The second crop is gathered in April, and the last and coarsest in May. That however which is imported is adulterated by mixtures of other leaves, so that tea in its purity and excellence is only to be enjoyed by the natives themselves.

* * *

FROM THE PORTLAND GAZETTE.

THE RETORT COURTEOUS.

Two neighb'ring lawyers, clever fellows,
One lack'd a book, and one a bellows.
Their names perhaps you'd like to know:
Elias one—the other Joe.
Joe sent a message to Elias,
For *Espannases's. Nisi Prius:*
This answer back Elias sent;
His *office books* he never lent,
But Joe might call if that would do,
And in his office read it through.
It chanc'd, Elias on the morrow,
To Joe, his *bellows* sent to borrow,
My *bellows* tell my worthy friend,
Says Joe, is what I never lend,
But he may call, if he's inclin'd to,
And *blow* all day, if he's a mind to.

* * *

PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE.

At the annual meeting of the Philadelphia Society for Promoting Agriculture, held on Tuesday, the 20th of January last, the following gentlemen were elected officers for the ensuing year.

President—Richard Peters.

Vice Presidents.

William Tilghman,
James Mease, M. D.
Nicholas Biddle,
Robert Coleman, *of Lancaster.*

Treasurer—William M. Walmsley.
Secretary—William H. Keating.
Assistant Secretary—William S. Warder.

Curators.

Israel Cope,
Joshua Longstreth,
Reuben Haines,
Joseph Cloud,
Adam Eckfeldt.

Committee of Correspondence.

Richard Peters,
William Tilghman,
Zacchens Collins,
James Mease,
John Vaughan.

Librarian—William S. Warder.

Editorial Correspondence.

Extract of a letter to the Editor, from a friend in Albany, dated 20th February.

"Our agricultural prospects are at present very inauspicious:—Grain did not attain half its ordinary growth before the winter closed upon it, owing to the cold and dry autumn. The month of January has afforded the novel spectacle of successive rains and frosts. The mean temperature for the month, I presume, has been fifteen degrees higher than usual. Apprehensions are of course, entertained that the wheat and clover are seriously injured, if not nearly destroyed."

THE FARMER.

BALTIMORE, FRIDAY, FEBRUARY 27, 1824.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Wharf flour, $5 37½—Howard street, do. $5 62½—Best family do. retail, $7—Wheat, red, $1 10—Corn, 35 cts.—Rye, 40 cts.—Oats, 28 to 30 cts.—Whiskey, 23 to 26—Butter, inspected, 10 to 15 cts.—Coal, Liverpool, bushel 40 to 45 cts.—Virginia, 28 cts.—Susquehannah, per ton $6 50 to $7—Rice, per cwt. $3 75 to $4—Beef, northern mess, per barrel $10—Cargo, No. 1, $8 to 8 50—do. No 2, $6—Baltimore prime, $10—Bacon and hams, 10 to 11 cts.—Cotton, W. I. Island, 18 to 20 cts.—Louisiana, &c. 16 to 17 cts.—Georgia upland, 14 to 16 cts.—Alabama, 12 to 13 cts.—Candles, mould, 12 to 13 cts.—Dipt, 10 to 11 cts.—Spermaciti, 25—Feathers, live, 30 to 35 cts.—Fish, herrings, Susquehanna, $2 75—Fall mackarel, No. 1, to 3, $4 50 to $7—Shad, trimmed, $6 to 6 50—Flax seed, rough, per bushel, 70 to 75 cts.—cleaned, cask, $8—Flax, per lb. 10 to 11 cts.—Hemp, Russia, $1 75 ton,—Country dew rot, 7 cts. per lb.—do. water rot, 9 cts.—Hops, fresh, 35 cts. per lb.—Hides, dryed, 15 to 19 cts. per lb.—Hog's lard, 12 cts. per lb.—Lime, per bushel, 30 to 33 cts—Leather, soal, best, 24 to 27 cts. per lb.—do. Eastern tan, 18 to 20 cts.—Lumber, board measurment, cargo prices:—Of the following articles we give the yard prices.—Oak timber and scant. $1 to 1 25—Boards all sizes, $1 50 to 2—Pine scantling, do. $1 to 1 25—Boards 4-4, $1 to 1 25—White do. 5-4, $1 75 to 2 50—do. co. 4-4, $1 15 to 1 30—do. cl. 4-4, $1 80—Shingles, cyp. 18 in.—$3 to 3 50—Shingles, junip. 24 do. $7 50 to 7 75—jun. com. $3 50 to 5—Staves, W. O pipe, $40 to 45—do. hhd. $25—do bbl. $15 to 17—R. O. bbl. $15—do. hhd. $17—Wool, fleece, merino full blood, 35 to 40 cts. per lb.—Cropped, 28 to 30 cts.—Common country, 29 to 30 cts.—Skinner, 35 to 40 cts.—When assorted and cleaned, any of the above will obtain an advance of 15 to 20 cts.

Retail prices of provision market—Beef, prime pieces, 10 cts.—Veal, 10 cts.—Mutton, 5 to 6 cts.—Turkeys, 75 cts. to 1—Geese, 50 to 56 cts.—Ducks, Canvasbacks, $1 25 to 2—Red heads, 50 to 75 cts.—Chickens per pair, 50 to 62½ cts.—Eggs, 12½ cents—Butter, first quality, 20 to 31 cts.—Turnips, per bushel, 50 cts.—Potatoes, do. 50 cts.—Parsnips, do 62½ cts.—Celery, 8 to 10 cts.—Carrots, 4 to 6 cts.—Cabbages, 2 cts. &c. &c.

Alderney Breed of Cattle

FOR SALE

One half blood Alderney Cow of large size, small neck, head, and horns, of brindle colour, five years old this spring, out of a handsome country cow, and got by James Creighton's imported Alderney bull. $50

One 3-4 Alderney heifer calf of 6 weeks old, large size, of a beautiful dark red, out of the above cow, and got by George Howard's imported Alderney bull. $20

One half blood three years old Alderney heifer, now with calf by a full blood Devon bull, will calve in July next.—This heifer is of fine size, out of one of General Ridgley's Bakewell cows. $50

Apply to me at my Agricultural Repository,
ROBERT SINCLAIR.

CONTENTS OF THIS NUMBER.

DRY CULTURE—"WASHINGTON AGRICULTURAL SOCIETY" OF EAST TENNESSEE—MARLE—SULPHATE OF QUININE—NATURAL HISTORY—Letter from John F. Smith, Esq. of Newbern, to the Editors of the Star, dated June 26th, 1811—ON THE "RUBBING DISORDER" IN CATTLE—GARDEN PLOUGH—ON BREAD MAKIMG—TO FARMERS—Fascinating power of snakes—Extract from the Memoirs of the Wernerian Natural History Society, vol. 4—New Tariff—Improved mode of carrying out anchors in ship's boats—Medical qualities of oysters in fevers and consumptions—Method of preserving fruit without sugar—Apple jelly—Tomatoe, or love apple catsup—Mutton hams—Ginger wine—Currant wine—To make Strong or bookbinders paste—Tobacco reports—Iron carriage wheels—Refinement—Tea—Poetry—Philadelphia Society for promoting agriculture—Editorial Correspondence—Advertisement—Prices Current, &c. &c.

Printed every Friday at $4 per annum, for JOHN S. SKINNER, Editor, by JOSEPH ROBINSON, on the North West corner of Market and Belvidere streets, Baltimore; where every description of Book and Job Printing is executed with neatness and despatch—Orders from a distance for PRINTING or BINDING, with proper directions promptly attended to, addressed to J. Robinson, Baltimore.

Political Economy.

TO THE EDITOR OF THE AMERICAN FARMER.

"THE HOUSE DIVIDED AGAINST ITSELF MUST FALL."

If there can be such a thing as degrees in truth, I would say, that in the whole catalogue of proverbs there never was, nor will be, one *more true*, than the foregoing; and that there never was, nor probably will be a more forcible exemplification of it, than the late address of I. C. Bates, Esq. delivered before an agricultural society at Northampton in Massachusetts. When such men as he appears to be, come out in opposition to the best interests of the particular class of which, I must presume he is a member, the influence which he is likely to exercise over minds less informed than his own, is much to be dreaded. For his eloquence excites our admiration; his uncommon perspecuity delights our understandings; and his great display of good feelings, so warms our hearts, that we are thrown almost entirely off our guard, against the false argument with which, (I verily believe, unconsciously to himself,) his address abounds. This erroneous reasoning, it shall be my humble endeavour to attempt to detect; as it threatens more mischief to our cause—from being the wounds of an apparent, and I dare say real friend, than an hundred wagon loads of such stuff, as we usually see written on this subject.

This excellent address, contains a very clear enunciation of the most important principles of political economy; but when he comes to apply them to the great interests of the community, it is truly surprising, that he should fall into some of the most striking errors of those writers, on the same subject, who have nothing in common with him, but these erroneous opinions. Another singularity in his address is, that he furnishes stronger arguments in self refutation, than most men probably could bring against him; but they are so separated from the positions which he tries to establish, that their connexion and contravening tendency require to be pointed out.

He first assumes as a fact, that agriculture is overstocked with labour; from which he infers that the excess should be employed in something else; as the best means of creating a demand for those agricultural products now so abundant, as to sell for little or nothing. So far, so good, if it be true; provided he leaves the sons of agriculture to find out this blunder for themselves; and to retain, as they have always heretofore possessed the liberty of choosing, whether they would change their profession, or persevere in a losing business. Mr. Bates having previously laid it down as a first principle, that no losing business will long be followed, where men are free to determine; and that all men have an indisputable right to change, or to continue their lawful callings, as may best suit their inclinations; where does he get the right, for government to interfere in such matters; and to prescribe, not only that a change *shall be made*, but to point out the time and manner, as they must do, if they take his advice, where he says: "*Let the government, therefore, give birth and protection to manufactures, by increasing the duties on importations*, cautiously and prudently at first, *but to the needful extent.*" This is carrying the matter up to the hub at once: for if this "*birth and protection*," are to be given at every hazard "*to the needful extent*,"—that is, until they are established in despite of all obstacles; the caution and prudence which he also recommends in doing it, would certainly be a great aggravation of the evil, instead of an alleviation; for who would not prefer being shot, or hanged instanter, to being put to death by slow and continual torture? But the best of it is, that Mr. Bates himself has saved us, (as I conceive,) from the apprehension of such mischief, should the government, instead of acting upon the above advice, without farther examination, proceed to the following passage of his address, wherein he has gone, I think to the full extent of denying the right to do, that which he has recommended. "The classification, (says he,) of men in society is *not arbitrary, but grows out of the nature of things. You may as well therefore attempt to change the immutable principles upon which society is founded, as to change the organization of it in this particular. You cannot do the one without the other.* Each department of industry, whether intellectual or corporeal, is filled, because there is something in it to be done, by which subsistence, or distinction, or both may be gained. *This diversity of occupation forms classes, all governed by the same motive, and posting with what ability they have, to the same results. Were you to take the fabric of the social state to pieces, therefore, it would make itself up again, in the same general form.*" And yet, only a few paragraphs before, he has advised government to undertake this very job, the inutility, and unlawfulness of which he has so clearly and happily illustrated. Now, if his last quoted position be true—and I pronounce it undeniably so, at least by any man having the smallest pretensions to common sense; where in the name of that common sense, would be either the use, or the justice of such compulsory, "taking to pieces," this grand social fabric, the classification of which is very properly said to result from the nature of things, as would ensue, were the national legislature to attempt, either by high duties or any other means, to change the relative numbers of the different classes into which society naturally divides itself. Ought not the obvious inefficacy of the attempt to alter, direct, and controul this right of self division, inherent in every community, so perspicuously pointed out by Mr. Bates, to satisfy even the most sceptical, that government cannot possibly possess any such power. Again, Mr. B. says; "here you have perfect security for life, liberty, and property. Here you have equal rights, and equal honors." But how can this possibly be true, if the mode by which I sustain life, the liberty of chosing this mode, and the property acquired in exercising it, are all so far subject to the will of government, that they may alter the first by taking away the second; and may transfer to others any portion of the last, which they please, "*to the needful extent of giving birth and protection to manufactures?*" How can this possibly be true, if our government can enhance the price of all the articles we consume, not for general purposes, as in the case of a tax producing public revenue, (which they have a right to impose,) but for the private benefit of a minority of its citizens? If this be equality of right, in God's name let us no longer make any boast of it, as a peculiar privilege of inestimable value; for the most despotic governments of the world have identically the same.

What Mr. B. says on the subject of competition amounts to this—"Let us give up the certainty of that greater competition which now exists between all the manufacturers of foreign countries, and such as we now have at home, securing lowness of price, and excellence of quality in all our purchases; for that partial and contingent competition which it is supposed will follow among our manufacturers alone, should the duties be raised high enough to exclude or greatly lessen the importation of foreign commodities; the inevitable effect of which, would be to leave the whole class of consumers dependent for an indefinite time, upon this contingency for a supply of all their wants, at greatly increased prices too, with greatly diminished means of procurement.

In regard to his most paradoxical assertion, that we ought to give more for an article of domestic, than of foreign manufacture; I must say, that he evidently takes for granted, what he ought first to have proved—to wit, that an increase of manufacturing establishments must occasion an increased consumption of agricultural products. This cannot be true, at least as to the two great staples, bread stuffs and meats, unless the population of the whole country is also augmented. For if the same number of citizens are only classified differently, so as merely to change the relative numbers of cultivators and manufacturers, it is most manifest that the same quantity of food will be consumed, as before. Our citizens being numerically what they were, can neither eat nor drink more than they did. The only alteration will be, that the producers of this food, being diminished by some of them being obliged to turn manufacturers, those who still continue to provide it, must of course get a higher price; but how this is to benefit the country at large, can be much more readily asserted, than believed. If this higher price is the consequence only of diminished supply, (as it evidently is,) the whole value of this supply—estimated in any way you please, cannot exceed, if indeed, it would equal the whole value of the much larger supply at a lower price. Our surplus products have not yet perished on our hands, and until they do—until they sell for so little, as not to leave some profit, after paying for the labour bestowed on them; they will continue to be produced, unless government should force a portion of our agriculturists by means of high duties to abandon their avocation. Yet it is upon the supposition of a considerable part of these products, being altogether unsaleable; as well as upon the assumption, that a mere change in the relative proportions of our classes, while their aggregate number remains the same, can increase the demand for agricultural productions, that Mr. Bates erects his fine air castle for augmenting the national wealth, by taxing agriculture and commerce, to "give birth and protection to manufactures."

Before it possibly could be advantageous in a national point of view, to give more for domestic, than for foreign manufactures, Mr. Bates, or some body else for him, must prove, that the whole amount of sales made by our domestic producers,—I do not mean at Waltham. Providence, Munson, and Southwick alone, but throughout the whole United States, would exceed in value, what they do at present, by more than the difference of the whole additional sum which they will have to pay in consequence of the increased price, of the whole of their purchasers. Can it be necessary to add, that unless such excess of value would result from the exercise of such excess of legislative authority, the nation at large could not possibly gain any benefit by this most delectable scheme, for a new and coerced classification of the good people of our Union. I call it new, because its advocates in enumerating the various blessings to be thereby dispensed, assert that it will diminish the number of agriculturists, which they have discovered, is too great; and will augment the number of manufacturers, which they affirm to be too small; although most strange to say, these few are unable—according to their own declarations, to live by trades which already divide from 15 to 18 per cent on the capital invested. That this is true of Waltham, and several other establishments, I have the most unquestionable authority for believing; while it is equally true, that poor agriculture, the ill-fated subject of so much praise, so many prayers, so much parental solicitude on the part of our legislators, but at the same time of so much oppression, can scarcely divide 3 per cent. for *her* labours; and is yet called upon for a still farther reduction. She already pays, either directly or indirectly almost every cent of every tax imposed either for state or national purposes; but she is still deemed, (as it would appear,) too plethoric, and must therefore be subjected to yet greater depletion Far better would it be to make a finish of her at once; and let it be hereafter, fully understood, that she is to work for others, and to any extent they please, whenever called upon; and that too, without the least murmur or complaint. I have denominated the proposed measure, a coerced classification of the good people of our Union, because law is called upon to effect that which the free citizens of our country are not expected to do voluntarily. This brings me back to the old enquiry, which cannot be too often repeated—whence comes the right of such violent interference, as that which is required of government? Cui bono—for whose benefit is it asked? Certainly not for that of the Nation.—Either it is not true, as we are told on all hands, that we are free to choose whatever lawful calling we please; or government cannot possibly have the power to render this freedom of choice utterly nugatory, by making the adopted calling too unprofitable to live by it. If however, in the exercise of this liberty to choose, I take up a profession which proves to be a bad one, (that of a manufacturer, for example,) this is my own affair one of the results of this free agency; and ought of course, to be at my own risk. No other man is bound, still less a majority of the nation, by any principle either of reason or justice, to pay for my errors of calculation in regard to my own private interests: consequently both justice and reason are violated by that government which undertakes to coerce this payment from others, to compensate me for my blunders. But, says Mr. Bates, "the arguments against an increase of duties, go, with a concentration of all their force, to show, that there should be no duties at all." And so they most assuredly would, but for a small proviso, which he seems entirely to have overlooked; and that is, *if there was any better way of raising the funds necessary to support government:* this being the ne plus ultra, according to *our* doctrine, of the constitutional power to impose duties.

There was one view of the subject of foreign competition, which I designed to present, but omitted in its proper place.—As it is calculated to show more clearly than any thing, which I have yet said; the difficulty, as well as the enormous cost of any attempt to counteract it in the way proposed, I must beg leave (as the huntsmen say,) "to cast back." We have been told, and, I believe truly, for it is English testimony against England,—printed in their books, and proclaimed to the world in their Parliaments, that the manufacturers of that country labour upon an average, sixteen or seventeen hours in the twenty four:—that in general they rarely ever see, much less taste meat:—that many of their occupations are nearly as destructive to human life as the plague; notwithstanding which, the lust of money and the high price of comfortable subsistence in so dense a population, supplies more sacrifices, as fast as their predecessors are cut off:—that they are necessarily brought up in total ignorance of every thing, but the various manipulations of their art:—that lingering disease, famine, pauperism, and death, no where find so many victims, as in the manufactories: and that the consequence of all this is, a most deplorable and appalling depravity of morals, as shocking to humanity, as it is poisonous to every genuine source of rational happiness: And it is with a host amounting to some millions of people, *thus* organised, and *thus* managed, that we are required to compete, in order to undersell them!

Most of the advocates of this competition, being fully aware of the conclusions to be drawn from such facts, endeavour, (I except Mr. Bates,) to represent human nature as quite a different affair on the western side of the Atlantic—What they have said, may be translated into intelligible language by some such paraphrase as the following:—We will not work our people near as hard—say not more than nine or ten hours in four-and-twenty—we will feed them well with meat and bread:—we will give our little boys and girls plenty of time to run about and kick up their heels to keep them healthy, provided they have any spirits left to do it, after ten hours confinement in the atmosphere of a crowded factory:—we will take special care of their morals—aye, *their morals*, by sending them to school a considerable part of their time; and when they get to an age to be taking improper liberties with each other,—why they shall be most studiously kept apart:—moreover, we will make them attend prayers night and morning, and go to church every Sunday, supplying them constantly with Bibles and Testaments: we will never turn them adrift to become parish nuisances, (as those hard hearted English do,) when worn out by noxious occupations in our service; oh no! we can never be so cruel and wicked,—we will keep them as the apples of our eyes. All this and a great deal more will we do, provided Congress will only be *so regardful of the public weal*, in plain English, so kind *to us-ward*, as to make all who cultivate the soil, and all who navigate the ocean; every mother's son of them, pay us for the extra expense of a procedure, so different from the mode in which they manage such matters across the water.

RURIS CONSULTUS.

Virginia, Feb. 17th, 1824.

AGRICULTURE.

TO THE EDITOR OF THE AMERICAN FARMER.

IMPROVED DURHAM SHORT HORNS.

Dear Sir,

I have less hesitation in sending to you, the pedigree of my improved short horn stock, as you have in 43d number of the Farmer, noticed the purchase I had made, of a calf begotten in England, by Mr. Champion's celebrated bull Blaize, and produced at Wye, by White Rose. You will perceive, that I could have no motive, to seek better blood, although I was glad, to avail myself, of the liberal intention, of my friend at Wye, to exhibit in Pennsylvania, a very beautiful calf, begotten by the bull, which Mr. Champion says, in his letter to you, of the 6th April, 1822, "*is considered the most complete animal I ever bred for symmetry and quality*," on a heifer, which he also says, excels for correctness of frame, neatness of bone, and uncommon appearance for milk.

I always considered White Rose, a fine animal; and you may recollect, I proposed to purchase her *alone*, at the time you offered to me, the bull Champion, and the other heifer at cost. I confess, I have had a strong predilection, in favour of Wetherill's stock, not only as he was one of the purchasers of Comet, and of some of the finest cows at Colling's sale, but as Mr. Williams' extraordinary bull Denton, was bred by him, and as all the heifers of his stock, which I have seen, are good milkers. At your suggestion, I applied to Mr. Champion, and offered a price, much higher, than that which, he had received for the bull, you imported, or than he had asked, for such an one, as he supposed, would satisfy me. He answered, "I regret it is "not in my power to send you a bull, possessing "the many qualifications you expect, the de-"scription you have given of Denton, it is im-"possible for me to equal." I proposed to pay to Mr. Champion more than he had demanded, as I did not suppose, that he would send to America, his finest bulls, at *sixty* guineas, at the moment he was selling Brigade Major, and Blaize, at *one hundred, and one hundred and fifty*, upon his farm. I have no doubt from the points, and shape of Wye Comet, and the pedigrees, of some of his stock that he possesses as fine cattle, as any man in England, although I confess, I was of a very different impression, until I had seen this calf by Blaize. If you have any doubt, of the valuable properties, of the "*Improved Short Horns*," as milkers, quick feeders, and small consumers—I should be glad, to convince you on my farm, that in early maturity, and all these essential items, their excellence is determined, by the degree of affinity, to the pure blood. I am, dear sir,

Most truly your's,
JOHN HARE POWEL.

Powelton, Philadelphia County,
February 17, 1824,

* * *

FOR THE AMERICAN FARMER.

SEEDS.

Albany, February 21, 1824.

Appreciating the importance of good seeds, both to the farmer and gardener, I send you, Mr. Skinner, some hints on this subject, suggested by experience and reading, which may be of interest to some of your readers.

1. *To raise good seeds*, care must be taken not only to select from the choicest plants, but also, that bad or different kinds of the same family. be not suffered to blossom in their vicinity, as the fecundating farina of the poorer sorts, which is carried by winds and by insects, will deteriorate the seed of the good. Hence, no two kinds of cabbage, turnips, beets, &c. should be suffered to seed within ten or twenty rods of each other, and it will be better, if they are put into different enclosures. And hence, if we would preserve from a fine variety of melons, it is necessary to plant them at a distance from other varieties. The brassida, (cabbage,) family not only mix among themselves, but are said to be affected by the pollen of the cauliflower, kale, and turnip.

2. *Seeds should be gathered as soon as they are ripe*, both to prevent waste and damage.

3. *They should be preserved* in a dry and temperate place, accessible to air; and, where it is convenient, kept in their pods or husks till wanted for sowing This may be done, with most kinds of annuals cultivated in the garden It prevents injury from heat or moisture, and preserves them in a healthy condition. Miller made this experiment. He divided parcels of lettuce, parsley, onion, and other seeds, one portion of which he put into vials which he hermetically sealed; the other portion into bags, and kept the whole one year—when planted, not one of the seeds grew, which had been kept in the vials, while all of those which had been kept in the bags grew well. An experienced gardener tells me, that the seeds of many annuals will, if preserved in the pods, &c. retain their vegetative power for two or three years, whereas, if taken out, they will seldom grow after the first

year My experience, and observation of the habits of plants, confirm this remark.

4. *When should seeds be sown?* Repeated failure in the seeds of perennials and biennials, to vegetate, when sown in the spring, led me to consult the economy of nature, and to adopt her laws as my guide. I found that the maple, beech, ash, and other forest trees—several shrubs, most of the bulbous flower roots, and a large portion of the biennial and perennial flowers, shed their seed upon the ground in autumn, and that the seed thus sown, if slightly covered, vegetated either immediately or in the following spring, and that if these seeds are thoroughly dried, as they must be by being wintered in the house, they either will not grow at all, or lay dormant in the earth for a year or more.

5. The pods of melons, cucumbers and pumpkins, improve by being kept till they are three or four years old. At that age they produce earlier, and more fruit, and run less to vines. The benefit of age may be partially obtained, by washing the seeds well, when taken from the fruit, to cleanse them from mucilage, or by carrying them loose in the pocket, some days or weeks before they are planted.

6 Wheat is said to be improved, as seed, by being kept a year; and, what is an important benefit, will then produce a crop without smut: Nay, more—I am induced to believe, that the crop will escape the injuries of the fly also. For I am almost a proselyte to the opinion, that the nit is deposited in the down of the kernel, before the grain is harvested, and that the same warmth which causes the seed to vegetate in the earth, hatches the insect there also. I am inclined to favour the hypothesis, and not without evidence, that the seed of both the smut and the fly, lose their reproductive power during the lapse of a twelvemonth. I will not venture to say, that liming seed is as efficacious against the fly, as it is against smut; but thus much I can say, that I always lime my seed wheat, and never have it injured by smut or fly, while many fields in my neighbourhood are annually devastated by the one, or materially injured by the other.

7. Seeds may be preserved in a healthy state according to the nature of their essential oil and the nature of the shell or covering, which envelopes the embrio plant Miller says, "the seeds of cucumbers, melons and gourds, which have thick horny coverings, and the oil of this seed being of a cold nature, continue good eight or ten years; and raddish, turnip, rape, &c. with other oily seeds, (whose coats, though they are not so hard and close, as the others, yet) abounding with oil, which is of a warmer nature, the seeds will keep good three or four years; whereas, the seeds of parsley, carrots, parsnips, and most other umbelliferous plants, whose seeds are, for the most part, of a warm nature, and have little oil in them, do lose their growing faculty often in one year, but seldom remain good longer than two years."

8. *Steeps.* The experiments of Duhamel and others, show that steeping seeds in any liquor, or mixture, with a view of *invigorating the gum*, is always without benefit, and often attended with injury—the seed containing the best nutriment, and all that is requisite, to extend the root, and unfold the feminal leaves. Steeps may be beneficially used to accelerate germination, to preserve the seed from grubs and other insects, and to destroy the seeds of insects, and parasitic plants, which may adhere to it. Corn soaked in a strong decoction of the roots of black hellebore (sometimes called itch weed,) and strongly saturated with nitre, has, with me, resisted the attacks of insects, birds and squirrels. A steep of tar water, will also protect seed in the ground. Lime and alkilus are most efficacious in destroying the eggs of insects, &c. The best method I know of to facilitate early vegetables, is to sprout the seeds, before planting, between two sods of earth, placed in the kitchen corner, and occasionally wet with warm water. The larger kinds may be laid in loose, the smaller wrapped in papers. They will sprout in from 24 to 48 hours.

J. B.

TO THE EDITOR OF THE AMERICAN FARMER.

ON THE CULTURE OF RAPE.

Newport, (Del.) Feb. 24, 1824.

DEAR SIR,

Your Correspondent Agricola, in your paper of the 13th inst. having requested some information on the method of cultivating Rape, I beg leave through the medium of the "American Farmer" to supply it.

To raise Rape for Sheep feed, the best is usually obtained upon good rich bottom land, but it may be raised upon any land not naturally barren; the land should be properly cleaned, and if it needs it, well manured; the proper season for sowing, is from the middle of May to the latter end of June, and should be eaten off in time to sow wheat in the fall, for which it is an excellent preparation; it may be sown broadcast on land just turned over by the plough; about two quarts of seed is sufficient for an acre, and kept until it is a foot high before the sheep are put upon it.—It is very rich feed, and if your correspondent puts his breeding ewes upon Rape about twelve or fourteen days before he puts the ram to them, (and to remain,) he will find his account in so doing at the lambing season.

To raise Rape seed, there is no danger of the land being too rich; the richer the better; and a naked summer fallow, except upon rich, clean bottom land, is, with good manuring, the way to obtain a crop. It may be sown as the season may suit, from the middle to the end of August, or the first week in September, in the manner above described; only that four quarts of seed per acre is the proper quantity, as it seeds better when sown thick; but thin sowing is proper for a crop to be eaten, as it grows more feed. It must be closely watched, so as it does not get too ripe before it is cut, in which case the loss of the best part of the seed would be the result. In order to avoid this, the cutting should commence as soon the seeds begin to have a light brown tinge on one side of the seed, which is ascertained by picking the forwardest pods and opening them daily; a great part of the crop will of course be quite green, but the evening dews will be sufficient to perfectly ripen the seed notwithstanding. I have found it the least trouble to sheaf it like wheat, making the band of the rape, which when green, answers very well; and it should be laid in regular rows towards the middle of the lands when shorn, so as to leave sufficient room for the carts to come between without touching it, as it is so very apt to shed when it has got dry.—After three or four days if the weather is dry, it will be ready for the stack, the bottom of which should be made of hay; but perhaps the barn may be at liberty, which is better.—The cart or carts employed in hauling the crop home, should be covered over to the outside of the shelvings with canvass, so that all the seed which shakes out in loading and hauling may be secured, otherwise one third, or, perhaps one half of the crop may be lost. It may be well to let it remain three or four weeks in the straw before the seed is thrashed out, as it will in that time be cured—It requires a steady hand to fork the sheaves to the cart, as a great loss will arise from employing a clumsy bungling hand, by the seed shaking out; and if it was taken home before the morning dew was gone, it would prevent much waste.

As soon as the field is cleared of the crop it should be ploughed lightly and harrowed, and after taking all the care in securing the crop which I have recommended, there will perhaps, be ten times as much seed grow as is proper to sow for a crop. After the land is become green, the harrow should be used lengthwise, and across the field; and if the season is favourable, there will be excellent eatage for sheep or calves, and the land may be sown with wheat in the fall, with a much better chance of success than after a naked fallow.

I should be glad to be informed if there are any mills where Rape Oil is manufactured.—The consumption of this article among the woollen manufacturers in Britain is enormous, and if it is wanted here, it can be supplied to any amount.

It was my intention to have made some remarks upon the advantages of live fences, but want of time prevents my adding more at present, than, that

I am Sir,
Your's respectfully,
WILLIAM PARKIN.

If your correspondent or correspondents, are in want of Rapeseed, my brother, John Parkin, has a few bushels of the growth of last season, price $3 per bushel.

I would beg to suggest as an improvement to your very excellent paper, the occasional insertion, say once in a month, of the London Corn Market litter, with the averages of grain to shew the indication of the ports being open for grain and flour.

TO THE EDITOR OF THE AMERICAN FARMER.

ON THE MANAGEMENT OF FRUIT TREES.

DEAR SIR,

Having seen, in your valuable paper, many useful remarks on the treatment of orchards, and as the season is at hand, when it is usual to trim them, wash, &c. I beg leave to give in my mite to the general stock, and to protest against that too common practice of white washing the trees, as it is, in my opinion, attended with the worst consequences. It is done under the impression that the caustic quality of the lime will destroy the insect—were it to end there, I would cordially approve of the application—It will not only destroy the insects, but trees also, by stopping up the pores of the bark, thereby preventing the absorption of those gases that are as essential to preserve, and promote vegetation; as it is necessary, in the human system, to keep open the pores of the body, to preserve health and vigor, how long would a man continue healthful, were his body to be incrusted with a thick paste? I have for many years, given considerable attention to the management of fruit trees, and am satisfied, cleanliness is as important to them, as it is to the human family. This is to be produced by scraping off the moss and old bark, and a good washing with soft soap and water in which tobacco has been steeped, during a moist spell of weather, in the months of February, or March. The taking off the moss and bark serves to expose the insects and their eggs to the sharp frosts, that are usual at that period of the year.—The soap suds soften the bark, open its pores, assist in destroying the insects, and act also as a stimulant. I have used all kinds of mixtures as a dressing to the trees, and have never found any to equal tobacco. It not only is active in its operation, but will effectually banish all insects and mice from the roots—other manures attract them.

I am unwilling to occupy your time by giving a detail of my experiments—I will, however, mention to you one fact, in confirmation of my opinion of the utility of keeping open the pores of the bark.

Contiguous to my garden, I have a small orchard, and have had for several years past, the scrapings of the walls and the weeds from the garden thrown into a heap, between a row of apple trees, which served, when rotted, as a top-dressing for the small seeds sown in the garden.—The trees nearest the heap far outstripped the others, and those limbs immediately over it, were of a much more luxuriant growth; and, as if anxious to inhale every exhalation from the weeds, inclined towards and bent over them, instinctively impelled to seek for nourishment, which was received through every pore, and which could not have been imbibed, had the trees been covered with a thick crust of lime, by white washing.

A friend to Pomona,

D. W. Jr.

Baltimore County,
Feb. 25, 1824.

REMARKS

ON THE CULTIVATION OF THE LOCUST TREE,

Written in 1817, *by Dr. S. Ackerly.*

The cultivation of the locust tree, on Long Island and in other parts of the state of New York, has been attended to with considerable profit to the agricultural interest, but not with that earnestness which the importance of the subject demands. This may have arisen from the difficulty of propagating it by transplanting, or not understanding how to raise it from the seed.

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The locust is a tree of quick growth, the wood of which is hard, durable, and principally used in ship-building. To a country situated like the United States, with an extensive line of sea coast, penetrated by numerous bays, and giving rise to many great rivers, whose banks are covered with forests of extraordinary growth, whose soil is fertile, rich and variegated, and whose climate is agreeably diversified by a gradation of temperature; to such a country, inhabited by an industrious and enterprising people, commerce, both foreign and domestic, must constitute one of the principal employments. As long as the country possesses the necessary timber for ship-building, and the other advantages which our situation affords, the government will continue to be formidable to all other powers. We have within ourselves four materials necessary for the completion of strong and durable naval structures. These are the *live oak*, *locust*, *cedar and pine*, which can be abundantly supplied. The former is best for the lower timbers of a ship, while the locust and cedar form the upper works of the frame. The pine supplies the timber for decks, masts, and spars. A vessel built of live-oak, locust, and cedar, will last longer than if constructed of any other wood. Naval architecture has arrived in this place and other parts of the United States, to as great perfection, perhaps as in any other country on the globe. Our "fir-built frigates" have been compared with the British oak, and stood the test; and in sailing, nothing has equalled the fleetness of some of our sharp vessels. The preservation and cultivation of these necessary articles in ship building, is a matter of serious consideration. It might not be amiss to suggest to the Congress of the United States to prohibit the exportation of them. The pine forests appear almost inexhaustible, and they will be so in all probability for many generations to come; but the stately cedars of Mobile, and the lofty forests of Georgia, where the live-oak is of a sturdy growth, begin to disappear before the axe of the woodsman. The locust, a native of Virginia and Maryland, is in such demand for foreign and domestic consumption, that it is called for before it can attain its full growth. It has been cultivated as far eastward as Rhode Island, but begins to depreciate in quality in that state. Insects attack it there which are not so plentifully found in this state, or its native situations. These give the timber a worm eaten appearance, and render it less useful. The locust has been extensively raised in the southern parts of the state of New York, but the call for it has been so great, that few trees have attained any size before they were wanted for use. Hence they are in great demand, and of ready sale, and no ground can be appropriated for any kind of timber with so much advantage as locust. Besides its application to ship-building, it is extensively used for fencing; and for posts, no timber will last longer, in or out of the ground. On Long Island, where wood is scarce, and fencing timber in great demand, the locust becomes of much local importance from this circumstance alone, independent of its great consumption in this city, among the ship-builders. In naval structures it is not exclusively applied to the interior or frame. In many places where strength is wanting, locust timber will bear a strain which would break oak of the same size. Thus an oak tiller has been known to break near the head of the rudder in a gale of wind, which has never happened with a locust one. Tillers for large sea vessels, are now uniformly made of locust in New York. It is the best timber also for pins or tree-nails, (commonly called trunnels) and preferable to the best of oak. The tree generally grows straight with few or no large limbs, and the fibres of the wood are straight and parallel, which makes it split well for making tree-nails, with little or no loss of substance. These are made in considerable quantities for exportation.

The locust tree does not bear transplanting well in this part of our country, but this in all probability arises from the custom of cutting off the roots, when taken up for that purpose. Most of the roots of the locust are long, cylindrical, and run horizontally not far under the surface. In transplanting, so few of the roots are left, to the body of the tree removed, that little or no support is given to the top, and it consequently dies. If care was taken not to destroy so much of the roots, a much larger proportion of those transplanted would live and thrive. So great has been the difficulty in raising the locust in this way, that another method of propagating it, has been generally resorted to. Whenever a large tree was cut down for use, the ground for some distance around was ploughed, by which operation the roots near the surface were broken and forced up. From these roots suckers would shoot up, and the ground soon become covered with a grove of young trees. These, if protected from cattle, by being fenced in, would grow most rapidly, and the roots continuing to extend, new shoots would arise, and in the course of a few years a thrifty young forest of locust trees be produced. The leaves of the locust are so agreeable to horses and cattle, that the young trees must be protected from their approach. When growing in groves they shoot up straight and slender, as if striving to out top each other, to receive the most benefit from the rays of a genial sun.

Another difficulty has arisen in propagating the locust, from inability to raise it from the seed. The seed does not always come to perfection in this part of the state of New York, and if it does, it will not sprout, unless prepared before planting. The method best adapted to this purpose, was proposed by Dr. Samuel Bard; but it is not generally known, or if known, is not usually attended to. When this shall be well understood and practised, the locust will be easily propagated, and then instead of raising groves of them, the waste ground along fences and places where the Lombardy poplar encumbers the earth, will be selected to transplant them, as by having them separated and single, there will be an economy in using the soil, the trees will grow much better, and the timber be stronger.

Doctor Bard's method of preparing the seeds, was to pour boiling water on them, and let it stand and cool. The hard outer coat would thus be softened, and if the seed swelled by this operation, it might be planted, and would soon come up. This has been followed with success on Long Island; and on a late visit to North Hempsted, (in 1817) I was led to admire Judge Mitchill's nursery of young locust trees, planted this spring.

The judge took a quantity of seed collected on this island, and put it in an earthern pitcher, and poured upon it water near to boiling. This he let stand for twenty-four hours, and then decanted it, and selected all the seeds that were any ways swelled by this application of heat and moisture. To the remainder he made a second libation of hot water, and let it remain also twenty-four hours, and then made a second selection of the swelled seeds. This was repeated a third time on the unchanged ones, when nearly all were swelled, and then he prepared the ground and planted them. He planted the seeds in drills about four feet apart, and in eight or ten days they were all above ground, and came up as regular as beans, or any other seeds that are cultivated in gardens. When I saw them, the middle of July, they were about a foot high, all thrifty and of a good color and condition.

It is the Judge's intention, to leave them in their present situation about three years, and then transplant; and provided he does not mutilate the roots in removing them, they will bear transplanting, live, and thrive, and be the most productive forest tree that a farm can have. This method of preparing the seeds and planting the locust, cannot be too warmly recommended to the farming interest. On Long Island, where fencing timber is growing scarce, the cultivation of the locust tree is of great moment. In the centre of the island, on and about Hempsted plains, where there is no timber at all, it must be a most valuable acquisition; and from the trials made in raising it from the seed, all difficulty must be removed to its extensive cultivation.

P. S. (1823.) Judge Mitchill transplanted the abovementioned young trees, on a side hill of waste ground, which has been for many years uncultivated, and his farm has been improved by the addition of a large grove of locust trees, which are now in a thriving condition.

FOR THE AMERICAN FARMER.

PEDIGREE OF MR. POWEL'S STOCK.

VIRGINIA

Was begotten in England, on Rosemary, by Mr. Curwen's General.

Rosemary, was by Flash, from Red Rose.

Red Rose, by Petrarch, d. by Alexander, g. d. by Traveller, gr. g. d. by son of Bolingbroke.

Petrarch, (bred by Charles Colling) by Comet, d. Venus by Ben—g. d. Phœnix by Foljambe—gr. g d. Favorite, by Alcock's bull.

Alexander, (bred by Charles Colling) by the bull Favorite.

Traveller, by Bolingbroke, d. old Blossom.

Comet, sold to Wetherill & Co. for 1000 guineas.

Ben, bred by R. Colling, by Punch, d. by Foljambe, g. d. by Hubback.

Flash, (bred by Mr. Seymour) got by C. Collings' Sir Dimple, d Carnation, (bred by Mr. Seymour) by Cripple, g. d. Moss Rose by Henry—gr. g. d. Rosebud, by Misfortune—gr. gr. g. d. Red Rose, by Favorite, gr. gr. gr. g. d. by Bolingbroke.

General, the sire of Virginia, got by Young Star.

Young Star, by C. Colling's North Star, d. Mary, (bred by C. C.) by Favorite, g. d. Venus, by Ben.

Queen, the grandam of Virginia, by Bruce. d. Empress, by Western Comet, g. d. Bright Eyes, by Marquis, gr. g. d. by Simon, gr. gr. g. d. by Traveller, gr. gr. gr. g. d. by Colling's Lamebull.

Bruce, by Jupiter, d. Rola.

Western Comet, by C. Colling's Major, d. Gentle Kitty, by Charges' Grey, g. d. by Favorite.

Marquis, d. by Daisy Bull, g. d. by Favorite, gr. g. d. by Hubback.

Simon, got by Favorite, d. by Punch, g. d. by Bolingbroke.

Bolingbroke, bred by C. Colling, got by Foljambe, d. Young Strawberry, by Dalton Duke, g. d. Favorite, by Alcock's bull, gr. g. d. by Smith's bull, gr. gr. g. d. by Jolly's bull.

Mr. Powel's Bishop

Was bred by Mr. Curwen in England, got by Wellington, d. Arbutus, (bred by Mr. Gibson,) by Harlequin, g. d. by Yarborough, gr. g. d. by Duke, gr. gr. g. d. by Jobling's Traveller, gr. gr. gr. g. d. by Bolingbroke.

Wellington, got by Comet, d. Peeress, by Favorite, g. d. Cherry, by Favorite, gr. g. d. Old Cherry by C. Colling's Samebull, gr. gr. g. d. by Hubback.

Harlequin, bred by Mr. Gibson, got by Alexander, d. Liberty, (bred by C. Colling) by Washington, g. d. Young Houghton by Punch, gr. g. d. Old Houghton, bred by Alexander Hall, by Hubback.

Washington. (bred by Mr. C. Colling,) got by Favorite, d. Lady by Grandson of Bolingbroke, g. d. Phœnix, by Foljambe, gr. g. d. Favorite, by R. Alcock's bull.

Punch, (bred by R. Colling,) d. by Broken Horn, gr. d. bred by Mr. Best.

Hubback, calved in 1777, (bred by John Hunter, by Snowdon's bull: (dam from Sir James Pennyman's stock, which were from Sir William, St. Quintin's stock,) Snowdon's bull by Robson's bull, (bred by Mr. Wastell near Darlington,) d. Wastell's Roan Cow, Robson's bull by Masterman's bull, Masterman's bull by the Studley bull.

Mr Powel's Matchless, bred in England, by Mr. Wetherhill, and of pedigree equal to Virginias: also fourteen others

Mr. Powel's *Wyecomet*, begotten *in England*, by Blaize, d. White Rose, by Warrior, g. d. by Charles (which was let at 450 guineas to Col Mellish and Mr Champion, for two years,) gr. g. d. by Prince.

IMPROVED DURHAM SHORT HORNS.

Extract from a report to the Workington Agricultural Society, by Mr. Curwen, the distinguished member of Parliament, for Cumberland; and a successful farmer, on an immense estate, in the north of England.

"In the last year, the valuable stock of my late friend, Lieutenant General Simpson, was disposed of: with the merits of which I was well acquainted, knowing it to be descended from some of the very best specimens, in the possession of Mr. C. Colling. At the time Mr. Colling sold North Star, the own brother of Comet was let to General Simpson, a son of his—Young Star, was the most perfect animal I ever saw—all General Simpson's young stock were from him, or his immediate descendants. Had not the distance, and the difficulty of removing, without great risk, precluded the attempt, I should certainly have tried hard to have become the purchaser of Young Star; he fell into the hands of Mr. Gray, and is since dead.

"General, the bull I bought, was out of Queen, Stars mother, and got by North Star. This I esteemed to be the next desirable animal, and I fortunately became the proprietor of him, with six cows and three heifers, and I have now to regret, that I did not farther extend my purchases.

"The cattle were in miserable condition; their subsequent improvement has been the surprise of many: in size, they are diminutive in symmetry and predisposition to fatten, producing at the same time, flesh of excellent quality, they cannot be surpassed. These, in the first instance, have been crossed by a son of Duke, the property of Mr. Smith, of Grindon. I shall continue to breed from the cross, and from the full blood also; it is likewise my intention to keep distinct, the blood of Mr. Donkin's cows, which, in uniting *the two essential qualities, of milking and fattening*, are highly valuable. Those which have hitherto been bred at the Schoose, have been much approved. Two heifers and a bull, were this spring, forwarded to Thomas Law, Esq. at Washington. *From friendship and connexion, as well as a desire to support the credit of my farming, the very best specimens were selected;* and I have reason to believe, that on their landing in America, even, after so long a voyage, they were greatly admired!

"The food on which those which have been sold, as well as those which remain, have been reared, is milk whilst calves; and green food, with turnips, chaff, and straw only, steamed, afterwards. The young cattle are reared under sheds, in small yards. New milk is given to the calves until they are six months old, sparingly the first month, but afterwards, from two to three gallons a day. The steers which have been bred and slaughtered, have been equal, in quality of beef, to any thing I could have expected or desired. Had these been slaughtered, when *two years and a half old*, weighing as they did at that time, from *eighty to eighty five stones, of fourteen pounds each*, (equal to 1120 or 1190 pounds,) they would have been found as heavy as at three years old.—Hence has arisen a doubt whether, without some very material change in the food of the animal, its fattening can be progressively increased beyond a certain weight. The stock has been not less remarkably than uniformly healthy."

ON DIET.

Diet, in animal economy, is a regimen or course of living, adapted both to the preservation of health and its recovery, especially from chronical diseases

The dietetic treatment ought to be conformable to the different constitutions of individuals. Those whose solids are relaxed and weak, should avoid all tough or viscid food, and such as is difficult to be digested. Their nutriment, however, ought to be substantial; and they should take frequent exercise in the open air. The plethoric, or those who abound with blood, cannot more effectually consult their health, than by a sparing use of whatever is in a high degree nourishing, as fat meat, rich wines, strong ale, &c. Their aliment should consist chiefly of bread, or other vegetables, and their drink of water, whey or small beer.

Persons of a lean habit ought to follow a course directly opposite to that before suggested.—Those who are troubled with acidity, should live chiefly on solid meat; and those afflicted with hot alkaline eructations should principally use acid vegetables. Invalids subject to the gout, to low spirits, to hypochondriac, or hysteric disorders, should avoid all flatulent food, as also all salted, or smoke dried provisions, and whatever is difficult of digestion, or apt to turn sour and rancid on the stomach Their food should be light, spare, cool, and of an opening nature.

Another important object to be considered, is the manner of life and age, together with the season and constitution. Those whose inclination, business, or profession lead them to a sedantry life, ought to be more sparing as to the *quantity*, and more attentive to the *quality* of their aliment, than others whose pursuits are widely different, or who are accustomed to take much exercise: the former ought particularly to avoid the use of every thing that is sour, flatulent, rancid, and oppressive to the digestive organs.

Persons liable to particular diseases, should be cautious in eating whatever tends to aggravate them. The gouty, for instance, should avoid drinking rich wines, strong soups, or acids.—Those who are subject to the gravel, ought to shun all austere and astringent aliments: nor should the scorbutic indulge in animal food.

The aliment in early life ought to be light, nourishing, and taken frequently, but in moderation; that of adults should be solid, and sufficiently tenacious; the diet proper for those advanced in life should resemble that of infancy.—At every period of life, gluttony ought to be sedulously avoided; for, not unlike too great abstinence, it destroys the powers of digestion; but the moderate repetitions of aliment is necessary for restoring the continual waste of the body.

Diet ought also to be regulated according to the different seasons of the year; because variations in the atmosphere produce corresponding changes in animal bodies. In consequence of the increased elasticity of the air, in the winter, the fibres are stronger, and better qualified for performing their various functions, and for digesting the stronger kinds of food. If there be no particular reason for the contrary, generous wines, and wholesome ale, together with warm broths and infusions, may be then taken, to promote the insensible perspiration, which is in some degree checked; as the cold air remarkably contracts the cutaneous pores. Some attention should also be paid to this circumstance, that the perspiration bear a due proportion to the liquid and solid nutriment consumed.

In the spring, the quantity of food ought to be somewhat diminished, and an additional allowance of the liquor usually drunk might be granted. In autumn, similar regulations are to be observed as in the spring; because the moisture and density of the air are nearly the same, and the weather is equally variable; so that perspiration is easily obstructed. During the summer, health may be most effectually preserved by vegetables and diluent liquors. Considerable care should be taken to abstain from provisions that are heavy and difficult to be digested, but especially from wine and brandy.

The feeble and convalescent ought to eat frequently, and but little at a time: the number of meals should be proportioned to the weakness of their frame:—for it is far less hurtful to a debilitated person to eat a few mouthfuls every hour, than to make two or three *hearty* meals in one day: an exception, however, ought to be made with respect to those who are naturally of a delicate and irritable constitution.

ON CHILBLAINS.

Chilblain is a small tumour, or ulcer, in the hands, feet, heels, &c. It is occasioned either by exposing warm parts too suddenly to a cold temperature; or by holding the hands, or feet, when extremely cold, too precipitately to a considerable degree of heat. Such affections always have a great tendency to mortification, in which they frequently terminate.

Children of sanguine habits, and delicate constitutions, are most liable to chilblains: which may be prevented by such remedies as invigorate the system: by wearing flannel socks from the beginning of September to the latter part of spring, and occasionally taking gentle laxatives when they are disposed to become costive. All these precautions, however, will be attended with no benefit, if young people are suffered to repair to the fire immediately after coming from the most severe external cold.

In the commencement of this painful complaint, the cure is easy: immerse the part affected, several times a day, for a few minutes, into cold water, and guard against sudden vicissitudes of heat and cold, as either are equally hurtful. But, if simple water procure no speedy relief, dissolve an ounce of salt-petre in half a pint of vinegar and an equal quantity of water, and foment with it the part affected every night. When the tumours will not yield to these applications, and still remain in a swelled and painful state, without producing ulceration, a few drops of the pure tincture of *benzoin* may be rubbed occasionally on them; and the parts should be defended against the external air, by soft linen cloths; from this simple treatment, the best effects have been experienced.

THE TIGER AND ALLIGATOR.

An interesting Anecdote, related by the Captain of a Davenport Guineaman.

The bosom of the ocean was extremely tranquil, and the heat which was intolerable, had made us so languid, that almost a general wish overcome us, on the approach of the evening, to bathe in the waters of Congo—however, myself and Johnson were deterred from it, from the apprehension of sharks, many of which we had observed in the progress of our voyage, and these enormously large. At length, Campbell alone, who had been making too free with his liquor case, was obstinately bent on going overboard—and although we used every means in our power to persuade him to the contrary, dashed into the watery element, and had swam some distance from the vessel, when we on the deck, discovered an alligator making towards him from behind a rock that stood a short distance from the shore. His escape I now considered impossible, his destruction inevitable, and I applied to Johnson how we should act, who, like myself, affirmed the impossibility to save him, and instantly seized upon a loaded carbine, to shoot the poor fellow before he fell into the jaws of the monster. I did not, however, consent to this, but waited with horror, the tragedy we anticipated—yet, willing to do all in my power, I ordered the boat to be hoisted, and we fired two shot at the approaching alligator, but without effect, for they glided over his scaly covering like hailstones on a tiled penthouse, and the progress of the creature was by no means impeded. The report of the piece and the noise of the blacks from the sloop soon made Campbell acquainted with his danger—he saw the creature making for him, and with all the strength and skill he was master of, made for the shore. And now the moment arrived in which a scene was exhibited beyond the power of my humble pen perfectly to describe. On approaching within a very short distance of some canes and shrubs that covered the bank, while closely pursued by the alligator, a fierce and ferocious tiger sprung towards him, at the instant the jaws of his first enemy were extended to devour him. At this awful moment, Campbell was preserved. The eager tiger by overleaping him, encountered the gripe of the amphibious monster.

A conflict then ensued—the water was covered with the blood of the tiger, whose efforts to tear the scaly covering of the alligator were unavailing, while the latter had also the advantage of keeping his adversary under water, by which the victory was presently obtained, for the tiger's death was now effected. They both sunk to the bottom, and we saw no more of the alligator. Campbell was recovered, and instantly conveyed on board; he spoke not while in the boat, though his danger had completely sobered him; but the moment he leaped on deck, fell on his knees and returned thanks to the Providence who had so protected him, and what is most singular, from that moment to the time I am writing, has never been seen the least intoxicated, nor has been heard to utter a single oath. If ever there was a perfectly reformed being in the universe, Campbell is the man.

Calligraphy.—M. Le Roi, of Paris, has contrived a new and very simple method for teaching the art of writing. A thin and perfectly transparent plate of horn, of the usual size of a leaf of paper, has the polish removed from one of its sides.—When laid upon the copy the hand of a child easily traces the letters upon the unpolished side, which neither absorbs the ink nor allows it to spread. When the whole plate is written over, the ink is washed off with water, and is ready for a new exercise. Thus the same horn, which is not liable to break, may serve indefinitely, and by this means produce a great economy of paper—a consideration not to be neglected. Several analogous methods have been adopted both in England and France. Oiled paper, glass, a machine for guiding the pupil's hand, &c. have been used, but it is evident that the method of M Le Roi has none of their imperfections. The minister of the interior, who has witnessed the success obtained by this invention, has rewarded the author; and the societies of encouragement, and of elementary instruction, as well as the writing academy, have expressed their approbation of this new process. Mothers may teach their children to write in the absence of the master, or even dispense with his attendance, by the adoption of the horn.

PITTSBURG, Jan. 20.

Longevity of the Horse.—There is now employed at the Point Brewery in this city a horse whose age is at least *thirty-one* years. For the last fourteen years he has been in the possession of his present owner; and he is now as active and sprightly as most horses of seven years old. He has hauled within the last fourteen years, upwards of 49,980 barrels of beer and porter.

BLACKBERRY WINE.

Squeeze fifty pounds of blackberries, strain them, and add 25 lbs. of New Orleans, or clean white Havanna sugar; put all into a ten gallon keg, and fill it with water. As it works add water, keeping the cask full. Add three pints of good brandy. The keg, if new, must be soaked with well distilled apple whiskey, or French brandy.

YEAST.

To one gallon of water, add three pints of malt, and one quart of hops, boil to two quarts, and strain the liquor boiling hot, over as much wheaten flour, as will make it of the consistence of thickened milk; and when almost cool, add half a pint of good yeast, when done working put it into a jug or stone pot, with about two quarts of cold water over it, and every time you use it pour off the water, and return fresh, when what yeast is wanted has been taken. It will keep good for two weeks.

The working will be done in two days, and the yeast is then fit for use, and may be put into a jug until wanted.

Sulphur a preservative against Measles—During the winter of 1817, the measles prevailed epidemically at Munster. Children affected with the itch, who were using sulphur externally and internally, were exempt. In 1822, measles occurred again, preceded for many days by a convulsive cough. For this symptom, I prescribed flowers of sulphur and white sugar, half a teaspoonful. Many trials were made on children of different families and ages, and *all* who took it in time escaped the disease.—*M. Tourtual.*

Horace A. Hayden, Esq of Baltimore, has discovered that the empyreumatic oil which comes over in the distillation of pyro ligneous acid is peculiarly valuable for preserving anatomical preparations. "Imbued with this oil, the animal textures seem entirely defended from all the changes of time." The acid is sold by the manufacturers for 25 cts. per gallon.

To make Opodeldoc.—This well known liniment is prepared by digesting three parts of soap in sixteen parts of the Spirits of Rosemary, till the former be dissolved, when one part of the Camphor should be incorporated with the whole. —This unguent is of great service in bruises, rheumatic affections and similar painful complaints; but being very volatile, it ought to be kept in bottles closely stopped, to prevent the access of air.

To clear Iron from rust.

Pound some glass to fine powder, and having nailed some strong linen or woollen cloth upon a board, lay upon it a strong coat of gum water, and sift thereon some of your powdered glass, and let it dry; repeat this operation three times, and when the last covering of powdered glass is dry, you may easily rub off the rust from iron utensils, with the cloth thus prepared.

To take Mildew out of Linen.

Take soap, and rub it well; then scrape some fine chalk, and rub that also in the linen; lay it on the grass; as it dries wet it a little, and it will come out at twice doing.

Proper Method of making Toast and Water, and the Advantages resulting therefrom.

Take a slice of fine and stale loaf bread, cut very thin, (as thin as toast is ever cut) and let it be carefully toasted on both sides, until it be *completely browned all over*, but no wise blackened or burned in any way. Put this into a common deep stone or china jug, and pour over it, from the tea kettle, as much clean boiling water as you wish to make into drink. Much depends on the water being actually in a boiling state.—Cover the jug with a saucer or plate, and let the drink cool until it be quite cold; it is then fit to be used: the fresher it is made the better, and of course the more agreeable. The above will be found a pleasant, light, and highly diuretic drink. It is peculiarly grateful to the stomach, and excellent for carrying off the effects of any excess in drinking. It is also a most excellent drink at meals, and may be used in the summer time, if more agreeable to the drinker.

A method of preserving Fruit fresh all the year.

Take of salt petre one pound, of bole armenic two pounds, of common sand, well freed from its earthy parts, four pounds, and mix all together. After this, let the fruit be gathered with the hand before it be thorough ripe, each fruit being handled only by the stalk; lay them regularly, and in order, in a large wide mouthed glass vessel; then cover the top of the glass with an oiled paper, and carrying it into a dry place, set it in a box filled all round, to about four inches thickness, with the aforesaid preparations, so that no part of the glass vessel shall appear, being in a manner buried in the prepared nitre; and at the end of a year such fruits may be taken out, as beautiful as when they were first put in.

* * *

To the Honorable the Senate and House of Representatives of the United States in Congess assembled.

THE MEMORIAL OF THE SUBSCRIBERS,

FARMERS OF THE STATE OF PENNSYLVANIA,

Respectfully showeth,

That your Memorialists, wholly cultivators of the soil, and no otherwise concerned in Manufactures, than in their own families, are firmly persuaded that the solid interests of the nation require, that an efficient protection be afforded to the manufacturing portion of our fellow citizens, who, with few exceptions, have been greatly depressed ever since the return of peace.

The depression of Manufactures has had the effect to injure agriculture, in a two-fold point of view:—

1st. From the close of the late war it has driven thousands of manufacturers and artizans, natives as well as emigrants, to agriculture, thus depriving the farmers of a considerable portion of the domestic market for the necessaries of life, which those classes afford: and moreover converting customers into rivals, by the surplus produce, beyond their own consumption, created by those persons thus deprived of employment at their usual occupations, and compelled to resort for support to the cultivation of the soil—thereby perniciously increasing that glut in foreign markets, to which may be fairly traced nearly the whole of the complicated distresses experienced by the farming interest in the middle states, in past years, particularly in 1820 and 1821.

2dly. The want of sufficient protection of Manufactures, greatly impairs the market for raw materials, hemp, flax, iron, hides, skins, &c. for which, at present, the demand is languid, and in many cases the price hardly adequate to the remuneration of the producer.

The idea, which, in common with the majority of our agricultural brethren, we long entertained of the advantages resulting from purchasing goods abroad, because they can be had cheaper than at home, has been proved by experience, to be ruinously fallacious. The saving, supposing a saving really to be made, of a few dollars, in the expense of clothing and other manufactured articles, is but a poor compensation for the great diminution of the domestic market for raw materials—and for the loss of a quarter or half a dollar in the price of a bushel of wheat, and in that proportion in other agricultural productions.—which diminution and loss are necessary results of that policy which so essentially and inevitably impairs the domestic market for those productions. But experience, which is an incomparably safer guide than theory, abundantly proves, that even the poor saving, which has been so speciously held out to induce the agriculturists to oppose any further protection of manufactures, has no existence. Of this position the event of the high duties imposed on coarse cotton goods, removes all possibility of doubt—as the American markets have been steadily suppled for years with those articles very far superior to the imported, and at a much lower rate than we formerly had to pay for the worthless foreign article for which they are a substitute. It therefore clearly appears that high duties in this instance, so far from proving injurious to the agricultural interest, have conferred on it a solid and substantial benefit; thus proving the utter fallacy of dogmas hitherto received by the mass of our citizens with the most implicit confidence. And there is every reason to believe, that the same results would follow the adoption of a similar course of proceeding in the case of woollen, iron, and other manufactures. If it were necessary to adduce foreign facts and experience to prove this effect of domestic competition, both would be amply found in the case of Great Britain, which excludes, by duties nearly tantamount to prohibitions, almost all foreign manufactures, and is yet enabled to undersell in manufactured goods in their own markets those nations which do not protect the industry of their people by adequate duties.

Whatever plausible arguments might be found for the refusal to afford adequate protection to manufactures, during the wars of the French Revolution, when we had abundant markets for all our agricultural productions, are totally inapplicable to our present situation, in consequence of the exclusion of our bread-stuffs, from nearly all the ports in Europe, unless when the failure of crops produces a danger of famine. Thus those nations from which we receive such immense amounts of manufactured articles, refuse to receive the chief, indeed almost the only important productions with which nature enables the inhabitants of the middle states to pay for them. We might therefore, as we have done in the case of our tonnage, without impropriety, reciprocate prohibition by prohibition. But this is not called for. Such an increase of duty, as would prevent our manufacturers from being overwhelmed in our own markets by their foreign rivals, would be sufficient for the purpose.

The pernicious effect of the above exclusion is palpable from the reduction in the amount and value of the flour exported from the United States lately, as follows:—

	Quantity.	Amount.
	Barrels.	Dollars.
Aver. of 1811, 12, 13	1,383,149	13,980,000
1816, 17, 18	1,121,982	12,346,704
1821, 22, 23	879,743	4,819,506

Thus it incontestibly appears, that the fortunes and prosperity of those of our fellow citizens engaged in the first and most important of all human pursuits, the raising of grain and other necessaries of life, are held by the precarious tenure of the seasons in Europe. If they are adverse, farming may be prosperous in the United States; but if otherwise, our hopes of a fair remuneration for our labours are blighted and withered. This servile dependence on the state of the European markets—is, we respectfully submit—unworthy of an enlightened age, and an independent nation, blest with such transcendant advantages as heaven has lavished on the United States.—Such a state of things is destructive of the vital interests of above two-fifths of the white population of the Union, depending chiefly on farming; and on every principle of justice calls loudly on the national representatives for a prompt and decisive remedy.

The protection of that important portion of industry employed in manufactures, at all times a sound and necessary policy, and supported by the opinions of the wisest statesmen, and the example of the most prosperous nations, has become at present an imperious duty—the foreign demand for our staples having, as above stated, considerably decreased; the quantity about one-third; and the amount nearly two-thirds; since 1811, notwithstanding the increase of our population in the intervening period.—Whereas our demands for manufactured goods must increase with our increasing population. We in consequence buy more from, than we sell to, foreign nations; and this, with nations, is as unerringly the road to ruin, as it is with respect to individuals.

Were there any doubt on the important subject thus respectfully presented to your view, it would be removed by a comparison of any two tracts of our country, in one of which manufactures are carried on extensively—and in the other agricultural pursuits chiefly or wholly, particularly when remote from the advantages of sea-port towns, as is the case with one-half of our territories. In the one, agriculture and horticulture, certain of steady and increasing markets, are carried on with life and spirit—lands are rising in price—every thing flourishes—and, what is of incalculable importance to the farmers, their females and children find valuable employment in and from the factories, for fragments of time which would otherwise be wholly lost. Habits of industry are thus acquired and rewarded—and public and private prosperity promoted. Whereas, in parts of the country destitute of manufacturing establishments, circulation is either arrested, or moves with a sluggish pace—money is rare and difficult to be procured—there are no markets for horticultural articles—lands are of little comparative value—in a word, every thing languishes. To exemplify this position, and to place it beyond the power of contradiction, it is sufficient to refer to the neighbourhood of Providence and Wilmington, on the one hand, and numerous districts in the interior of Pennsylvania and in the fertile districts of Kentucky and Tennessee on the other. The difference of soil, and some other natural advantages, is greatly in favor of the latter. But the contrast in prosperity is immensely in favor of the former—and the inference in support of the system we advocate irresistible.

We therefore respectfully request you will adopt such a modification of the existing tariff, as may afford complete protection to the manufactures of our common country.

December 15, 1823.

* * *

CASHMERE GOATS.

These valuable animals will doubtless soon be introduced into our own country. The Massachusetts Agricultural Society some time since, offered "the sum of one hundred dollars to the person who should introduce into Massachusetts from Europe, a male and female goat of the pure Cashmere breed." From a letter published in the Massachusetts Agricultural Repository for January 1824, from John Wells, Esq. in Paris, it appears that these animals have been successfully introduced into France; that the price of them are from $15 to 75 a piece, and that the duty on their exportation is only about four cents. The original stock from which France is now supplied was procured with much labour and expense, by Messrs. Ternaux and Jaubert, from the foot of Mount Caucasus, in Asia: out of 1,229 goats with which they set out, only 400 reached home alive. It is from the *down or wool* of these animals, that those expensive articles, called *Cashmere shawls*, are made. The down is procured from them in the month of April by combing them with fine combs.

THE LAKE COUNTRY.

The following is an extract of a letter from a citizen of Crawford County to his friend in Harrisburg; and shows that the direction of trade has been turned from New Orleans to New York; that, in consequence of the forward state of the New York Canal, wheat has rose near 100 per cent in value there, and at Erie, more than 100 per cent.

Extract, dated February 1, 1824.

"In this county we begin to feel the effects of the New York Canal. Wheat is just passing the door that is to go to that canal:—they pay 75 cents a bushel for it—and I understand there are merchants on from Buffaloe at Erie, purchasing all they can get, and giving one dollar per bushel. This augurs well for us. Our lands will rise in value and settlements on vacant lands will become more rapid."

PUBLISHED IN THE AMERICAN FARMER, BY ORDER OF THE STATE.

A report of the tobacco inspected at and delivered from Magruder's Inspection Warehouse, during the quarter commencing on the first Monday in October, eighteen hundred and twenty three, and ending on the first Monday in January eighteen hundred and twenty four.

	Domestic growth.	Growth not of this state.	Re-inspected.	Total.
Number inspected.	52		8	61
Number delivered.	80			80

NAYLOR & WILSON, Inspectors.

TREASURY OFFICE, ANNAPOLIS, Feb. 16, 1824.

True Copy, from the original report on file in this office.

B. HARWOOD, Tr. W. S. Md.

THE FARMER.

BALTIMORE, FRIDAY, MARCH 5, 1824.

MEETING OF THE TRUSTEES OF THE MARYLAND AGRICULTURAL SOCIETY.

The last meeting of the trustees was at the residence of Richard Caton, Esq.—The members were nearly all present, hearty and zealous in the good cause. Good temper gave zest to good cheer. The list of premiums was not fully decided on, because it was not then anticipated, that the legislature of the state, would, in their wisdom, for it is said, that "in a multitude of counsel there is wisdom," deem our institution unworthy of pecuniary patronage. They have, however, given us a naked act of incorporation, and as to a donation, we must hope for better things in better times; we are not to wonder at the result in this case, when some of the delegates from the very county, in which our exhibitions have been held, and who ought to be sensible of the utility of our institution, if it possess any, voted against us!—The delegates from Talbot county, in which the Eastern Shore exhibitions are held, seem to have taken a different view of their duty; they *saw on the ground*, at their first and only exhibition yet held, more than three hundred travelling vehicles of different kinds, and probably concluded, that an institution, which brings together, for friendly intercourse, and mutual interchange of opinion and experience, such a concourse of intelligent agriculturists, could not fail to be useful in many important respects to that neglected class of citizens, and even as worthy of *legislative encouragement*, as Penitentiaries, Medical Colleges, &c. and many other establishments, which have attracted the favour of the state—*for the present*, however, we must lay this question on the shelf, but *we shall take it down again.*

The next meeting of the trustees will be held on *Wednesday next*, at the residence of B. W Hall, Esq. at 12 o'clock, when arrangements will be made for the next exhibition—a punctual attendance of all the members, at the hour, is earnestly expected. At the meeting at Mr. Caton's, a resolution was passed, which made it the duty of the corresponding secretary, to request *each one* of the trustees, to make return on Wednesday next, of the amount of his subscriptions, and to express to each, the hope of the Board, that they would come, with not less than *ten* names on their list.

We are apprehensive, that some gentlemen, whose good *wishes* for the society cannot be doubted, may not have taken the necessary pains to accomplish, in this *important* concern, what cannot be done, without a *little activity* and *earnestness*. Why is it that one shall get twenty subscribers, and another with equal means, get none at all? The fact is, that in the various concerns of this life we are too apt to *postpone* our duties, "time enough," is the bane of useful enterprises. Let us remember, that "one to-day, is worth two to-morrows," as poor Richard says, give me your *doers of the work*, "the cat in gloves catches no mice."

☞ We could wish that other gentlemen who own domestic animals of improved and valuable blood, would comply, as Col. Powel has done, with our request to be furnished with the Pedigrees of their Stock, to be recorded in the Farmer.

There is as much difference in the various races of neat cattle, as of horses—and, who can sell a blooded horse, let his performance be what it may, unless he can *trace his pedigree?*—Pedigrees will not be kept, where no attention is paid to the stock itself, and where continued attention is not paid, permanently fine qualities cannot be established.

☞ The bull Bishop, and one of the heifers by General, were purchased by Mr. Powel, upon whose farm, animals from this stock, as well as from his various cows, may be had at prices from $100 to $300.

☞ There is in this number, more of the *politics of Agriculture* than we could have wished; but the moment is critical, and invites discussion.—The Tariff Bill pending in Congress, is of more vital importance to the whole agricultural community, than they seem to be aware of.—*They* are dispersed, with imperfect means of concert, slow to apprehend, and yet slower to move.

PRICES CURRENT—CORRECTED WEEKLY.

Whart flour, $5 37½—Howard street, do. $5 62½—Best family do. retail, $7—Wheat, red, $1 10—Corn, 35 cts.—Rye, 40 cts.—Oats, 28 to 30 cts.—Whiskey, 23 to 26—Butter, inspected, 10 to 15 cts—Coal, Liverpool, bushel 40 to 45 cts.—Virginia, 28 cts.—Susquehannah, per ton $6 50 to $7—Rice, per cwt. $3 75 to $4—Beef, northern mess, per barrel $10—Cargo, No. 1, $8 to 8 50—do. No 2, $6—Baltimore prime, $10—Bacon and hams, 10 to 11 cts.—Cotton, W. I. Island, 18 to 20 cts.—Louisiana, &c. 16 to 17 cts.—Georgia upland, 14 to 16 cts.—Alabama, 12 to 13 cts.—Candles, mould, 12 to 13 cts.—Dipt, 10 to 11 cts.—Spermaciti, 25—Feathers, live, 30 to 35 cts.—Fish, herrings, Susquehanna, $2 75—Fall mackarel, No. 1, to 3, $4 50 to $7—Shad, trimmed, $6 to 6 50—Flax seed, rough, per bushel, 70 to 75 cts.—cleaned, cask, $8—Flax, per lb. 10 to 11 cts.—Hemp, Russia, $1 75 ton,—Country dew rot, 7 cts. per lb.—do. water rot, 9 cts.—Hops, fresh, 35 cts. per lb.—Hides, dryed, 15 to 19 cts. per lb—Hog's lard, 12 cts. per lb—Lime, per bushel, 30 to 33 cts—Leather, soal, best, 24 to 27 cts. per lb.—do. Eastern tan, 18 to 20 cts.—Lumber, board measurment, cargo prices:—Of the following articles we give the yard prices.—Oak timber and scant $1 to 1 25—Boards all sizes, $1 50 to 2—Pine scantling, do. $1 to 1 25—Boards 4-4, $1 to 1 25—White do. 5-4, $1 75 to 2 50—do. co. 4-4, 1 15 to 1 30—do. cl. 4-4, $1 80—Shingles, cyp 18 in.—$3 to 3 50—Shingles, junip. 24 do. $7 50 to 7 75—jun. com. $3 50 to 5—Staves, W. O. pipe, $40 to 45—do. hhd $25—do bbl. $15 to 17—R. O. bbl. $15—do. hhd $17—Wool, fleece, merino full blood, 35 to 40 cts. per lb.—Cropped, 28 to 30 cts.—Common country, 20 to 30 cts.—Skinner, 35 to 40 cts.—When assorted and cleaned, any of the above will obtain an advance of 15 to 20 cts.

Prices of Seed.—Orchard Grass per bushel, $2 50—Lucerne, do. do. 50 cents—St Foin, do. do. $7—Red Clover, do. do. $5 50—Timothy, do. do. $4—Herds Grass, do. do. $2—Millet, do. do. $1—Margel Wurtzel, do. do. $1 50—Ruta Baga, do. do. $1.

Retail prices of provision market—Beef, prime pieces, 10 cts.—Veal, 10 cts.—Mutton, 5 to 7 cts.—Turkeys, 75 cts. to 1—Geese, 50 to 56 cts.—Ducks, Canvasbacks, $1 25 to 2—Red heads, 50 to 75 cts.—Chickens per pair, 50 to 62½ cts.—Eggs, 12½ cents—Butter, first quality, 20 to 31 cts.—Turnips, per bushel, 50 cts.—Potatoes, do. 50 cts.

CONTENTS OF THIS NUMBER.

"The House divided against itself must fall"—Improved Durham Short Horns—Seeds—On the culture of Rape—On the Management of Fruit Trees—Remarks on the cultivation of the Locust Tree—Pedigree of Mr. Powel's Stock—Improved Durham Short Horns—On Diet—On Chilblains—The Tiger and Alligator—Calligraphy—Longevity of the Horse—Blackberry Wine—Yeast—Sulphur a preservative against Measles—Pyro-ligneous Acid—To make Opodeldoc—To clear Iron from Rust—To take Mildew out of Linen—Proper method of making Toast and Water, and the Advantages resulting therefrom—A Method of preserving Fruit Fresh all the year—The Memorial of the Farmers of the State of Pennsylvania, to Congress—Cashmere Goats—The Lake Country—Tobacco Report—Meeting of the Trustees of the Maryland Agricultural Society—Editorial Remarks—Prices Current, &c.

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AGRICULTURE.

SINGULAR DISEASE OF CATTLE IN OHIO.

[The following description of intensely painful and very singular disorders of cattle in Ohio, would be more valuable to our readers, if it were accompanied with a *prescription* for their cure—by making publick the symptoms, however, it may be, that remedies may be discovered.]—*Edit. Am. Far.*

TO THE EDITOR OF THE AMERICAN FARMER.

Marietta, Ohio, Feb. 12, 1824.

Dear Sir,

Observing in a late number of your paper, some notices of a new and singular disease amongst neat cattle in Maryland and Kentucky, I am induced to transcribe from my note book, an account of what appears to me to have been a similar disease, which appeared amongst the cattle in this county, in the year 1813.

Should you think them of any value, you are at liberty to make them public.

Very respectfully,
Your obedient servant,
S. P. HILDRETH.

About the 10th of September, A. D. 1813, Col. Joseph Barker, an intelligent and observing farmer, living near the big Muskingum river, seven miles from Marietta, noticed in one of his cows, an unusual propensity for rubbing her nose, and side of the head against every hard substance that came within her reach. He also noticed some slight twitchings in the muscles of her neck, which would draw her head a little to one side; she appeared to eat well, to drink, and was in other respects seemingly in health. In a few hours the inclination to scratch and rub the side of her face, and the angle of the lower jaw, encreased to an alarming degree—the more she rubbed, the more the desire of rubbing appeared to increase. He also noticed a slight swelling along the course of the salivary duct, from the parotid gland, to where it passes into the mouth. This gland on the opposite side was also swelled, and the swelling spread along the neck, and over the side of the head. The hair and scarf skin, was in a few hours entirely rubbed off from the side of her neck and head; she appeared to be in the greatest agony, and in the course of 12 or 14 hours from the time he first noticed her illness she expired. For several hours previous to her death, she was unable to stand, but the desire of rubbing herself continued to the last, and the earth was all torn up in a circle, round where she lay, by her continual efforts in rubbing The following day, another of his cows was attacked in a similar manner. He first noticed it by her licking her nostrils with unusal eagerness; this was continued until the blood would follow each stroke of the tongue. The subsequent symptoms were similar to those in the first attacked, and she died in about the same time. After this one or two fine large steers were attacked, and several more cows, who all died in the same manner.

On the 17th September, I was at his house; a cow had been attacked but an hour or two before my arrival. She was licking her nostrils with great violence, and every 6 or 8 minutes had sudden twitches in the muscles of the neck; the side of her face had began to swell, and particularly along the course of the principal salivary duct. His mode of treatment had been bleeding very copiously, in some of the cases, to the amount of two gallons, or thirty-two pounds—cutting off the end of the tail, &c. By my advice burning with a red hot iron, just back of the horns, immediately over the spina medulla, or spinal marrow, as it leaves the head, was tried on this cow. The operation appeared to give the cow ease, and she would follow the burning iron with her head, with great eagerness. No sensible benefit appearing to arise from this operation, and the disease continuing to increase, the operation of trepaning was next tried, with the expectation that insects or worms, similar to those often found in the frontal sinuses of the heads of sheep, might be the cause of the disease, and in this way removed. Accordingly an incision was made in the skin, about midway between the eyes and horns, and two portions of the bone removed. The lower opening communicated with the frontal sinuses, and as no signs of worms could be discovered, another opening was made higher up, communicating with the brain. The dura mater, or membrane of the brain, appeared turgid, and on puncturing it, discharged a considerable quantity of bloody serum or water. The cow did not resist the operation, nor make much struggling at the incision in the skin. It did not, while I was by, appear to afford any relief. The blood drawn from them all has been unusually dark coloured. The flesh of this cow, was to my feeling, colder than when in health; the eyes dull and glassy, and the lids widely extended under the operation of rubbing or licking; which last operation is carried to such excess, as to produce the utmost distress, and make them bellow aloud.

The bowels of the diseased are in good order, and the viscera of the abdomen and chest, appear healthy, on examination after death. The weather previously to the appearance of the disease had been very sultry and dry; but the cattle diseased had fed in a pasture, well shaded with forest trees, and lying immediately on the bank of the Muskingum river, to which they had access at all times. One of the steers, after he was attacked went into the water and continued there until a short time before his death, being the greater part of a day. The disorder was not confined to this farm, but attacked several other cattle in the neighbourhood. In one instance, the itching commenced on one of the hind legs, near the hoof; and in another it began on her udder.

Amongst other remedies tried, were strong decoctions of jamestown weed, or stramoniun; tobacco; and saltpetre, in doses of three or four ounces, with strong purges. But all without benefit—so far as I have heard, the disease has in *every instance* proved fatal. The following year, a few cases appeared in a distant part of the county; but since then, I have no knowledge of its existence in this part of the state. The disease appears to have been in some measure contagious, as there is one instance of a dog being attacked, who was known to have eaten of a cow recently dead with the complaint. In a few hours after he gave notice of his illness by his howling, and continually rubbing the top of his head. His master, a curious observing man, took a live coal from the fire, and placed immediately on the affected part—so far from complaining, he immediately ceased howling, and as long as it continued to burn, was apparently easy. However, in a few hours the dog died. From this circumstance, some idea may be formed of the intense suffering of the poor brutes, who were subjects of this very curious and singular disease.

I have often thought it was a fortunate thing for the illnatured and ugly old women, any where in the neighbourhood of this disease, that the belief in witchcraft has been banished from our land, or I fear, that many a harmless old soul would have had this sin laid to her charge.

* * *

AGRICULTURAL SOCIETY OF BARNWELL DISTRICT, N C.

(Inserted by request of the Society.)

The *Farmer's Society* of Barnwell District, this day awarded the following *Premiums.* of twenty dollars, or a silver cup of that value. :

1st. To Orsamus D. Allen, for his Gallatin Mare, 3 years old.

2d. To William B. Bull, for his two year old bull—*Cocke.*

3d. To George O. Dom, Senr. for his year old bull.—*Lafayette.*

Also, Premiums of 15 dollars, or cups of that value.

1st. To Wm. R. Bull, for the greatest quantity of Potatoes, from one acre, being 352 bushels and a half. Dr. Bellinger made from his acre 263 bushels and a half.

2d. To Wm. R. Bull, for his crop of Rice, from one acre, being 65 bushels and four quarts. This was an acre of pond land.

3d. To James D. Erwin, for the greatest quantity of Corn, from one acre of high land, being 86 bushels and 12 quarts. The first crop, was 69 bushels and one peck. The 2d crop planted the 20th of June, and measured in October, was 17 bushels and half a peck. Dr. Bellinger made from one acre of Gourd Seed Corn, 67 bushels, 3 pecks, and two quarts, of sound merchantable Corn, and one bushel and 15 quarts of unripe and rotten corn. The first crop was 57 bushels and 2 quarts of sound andmerchantable corn, and 7 quarts of rotten corn. The 2d crop planted in June, and measured the 11th of December, was 10 bushels and 3 pecks of sound and dry corn, and 1 bushel and 1 peck of unripe and rotten corn. Dr. Bellinger also made from one acre of Flint corn, 63 bushels and 5 quarts of sound corn, and 2 bushels and 5 quarts of unripe and rotten corn. The first crop was 51 bushels, 3 pecks, and 3 quarts of sound corn, and 5 quarts of rotten corn. The 2d crop planted in June, and measured the 11th of December, made 11 bushels and 10 quarts of sound, dry and merchantable corn, and 2 bushels of unripe and rotten corn.

Samuel Ashley, made from one acre of high land, 24 bushels of wheat, 22 bushels of corn, and 6 bushels of pease, being 52 bushels of grain from the acre.

Also Premiums of Ten Dollars, or Cups of that value.

1st. To John Nimmons, for his two year old hog, "Don Quixotte," weighing 458 lbs.

2d. To Dr. Bellinger, for his year old female hog, "Bessie Bell," weighing 226 lbs. B. H. Brown's boar, do. 198 lbs. Do, do. young sow, do. 192 do.

To Wm. R. Bull for the greatest crop of pease, reported to the society, from one acre, being six bushels, and one peck of sound dry and merchantable pease.

4th. To Wm. R. Bull, for his ¾th blooded Merino ram, "Col. Humphreys."

A Premium of Five Dollars, was awarded to Samuel Ashley, for his specimen of Homespun, of Cotton Warp, and Wool Filling; Mrs. Thurston was presented with Three Dollars, for a piece of Homespun of Cotton Warp, and Wool Filling, which she submitted to the inspection of the Society, F. J. Hay, reported to the Society, having obtained the last season, from three quarters of an acre of high land, planted with Alabama Cotton Seed, 1234 lbs. of Seed Cotton.

JENNINGS O'BANNON, *Secretary.*
Of the Farmer's Society, of Barnwell District.
Barnwell Court-House, 19*th of Jan.* 1824.

A list of Premiums to be distributed at the next Exhibition, will be inserted in our next.

Edit. Am. Far.

ON ORCHARD GRASS.

TO THE EDITOR OF THE AMERICAN FARMER.

Brookville, Montgomery Co. Md.

DEAR SIR,

As I conceive I have received valuable information, very frequently, from perusing your excellent work, without ever offering for the consideration of its numerous readers, a single hint, suggested by my own observation, I was led to consider, that I could not have benefitted in this way so much, had others done as I have. Now this reflection has been an inducement to me, to state for information, that I have been in the practice of sowing orchard grass seed liberally, for about six years, during which time my observations have led to the following conclusions, to wit—that it will afford more pasture upon ground, in a moderate state of improvement, than any other grass I am acquainted with, which perhaps, is in part owing to the blades continuing to grow on, after being bitten off, without having to shoot out again from the root, as other upland grasses do. That it is not liable to be thrown out by the frost, but continues to thicken from year to year, so as to form an excellent sward. That a farmer who will save his own seed, can supply his farm with it, at a less expense, or with less labour, than with any other I have ever known.

That upon good land, it will give a good crop of hay, (and I dont know of any grass that will upon poor land,) and that during the three last summers, I have had, I think, a fair opportunity of observing the most conclusive evidence of its being much less liable to cause the slavering distemper in either horses, kine, or hogs, having at the season, when that prevails, repeatedly turned my stock, from grounds affording a good supply of clover, timothy, and the natural grasses of the country, and where they were falling off daily, into a field of orchard grass, and in a few hours, the disease would be arrested, and very soon a manifest improvement take place in their condition. And this to the no small surprise of a neighbour, who at such times, particularly during the late summer and autumn, had no other resort, but to feed his horses on grain, every day, even when idle.

Without any other interest than that, which every friend to agricultural pursuits must feel, I have been induced to offer the above remarks, on this most valuable grass, founded on actual experience; and thus, to throw my mite of information, into the public stock.

AMOR PATRIÆ.

From Radcliff's Agriculture of Flanders.

FORCE OF WORK HORSES AND MANNER OF FEEDING.

Eight horses perform the entire work of the 200 acres, and are in the highest possible condition. They are of the most compact kind of Flemish horse, and do not exceed 15½ hands in height; chiefly roan and chesnut in color. As the banks of the river supply good hay, in this district they are indulged with that species of food, which is not the case in other parts of Flanders; but they are also fed upon straw, chiefly of rye, and upon oats with chopped straw in every feed, and *after* every feed, a bucket of water, richly whitened with rye, or oatmeal. A vessel of this composition is in every stable; nor are the horses suffered to have any other drink. The quantum of food in the 24 hours for each horse, in winter, is 15 lb. of hay, 10 lb. of sweet straw, and 8 lb. of oats; in summer, clover is substituted for hay; the other feeding remains the same; and the white water is never omitted: on this they place a chief reliance. The allowance of oats is but moderate, and yet the horses are in superior condition: the chopped straw contributes much to this, in converting by the mastication necessary, every grain of corn to nutriment. The use of it is so universally approved throughout Flanders, that in every town it is sold by retail, and if generally adopted with us, it could not fail to improve the condition of the working horses, and lessen the expense of their provender.

In Flanders, a farmer will work fifty acres with two horses; and by the regularity of his care and keep, will preserve their condition. In Ireland, the great wheat farmer of Fingal, upon a similar extent, will keep four times the number, fed more expensively, but not so judiciously, always over-worked and always poor. Some of these farmers, upon 100 acres, keep sixteen horses in their employ, and there have been instances of three-fourths of that number being lost within the year by hardship and disease. By these means the profits of a farm are consumed without benefit to the farmer; and what would reasonably support and enrich him, is squandered upon supernumerary horses. This special circumstance not the high rent, keeps the tenant in indigence and difficulty. If landlords interfered to procure for their tenantry a good description of working horse, and encourage them to use him properly, and feed him well, it would tend more to their advantage than any abatement they can give. Upon the farm of Vollandre, the management was in all points, to be approved: economy prevailed in every respect, except in the application of manure; the occupier was in comfort and affluence, and yet his rent was near 40s. by the plantation acre, and his taxes triple those of the Irish farmer. The difference is to be found in established system, skilful management, and unceasing industry.

Upon the farm of which we have been speaking, all the crops yield a great return—too much so to be stated as the average of a district; the succession, however, is pretty generally the same.

The answers of Mr. Van de Poes, President of the Commission of Agriculture in South Holland, to questions of the Right Honourable Sir John Sinclair, Bart. Respecting the Dairy of Mr. Van de Poes.

Q. 1st. The number of cows?

A. Sixty-four of all ages.

Q. 2d, How is the milk disposed of? in making butter? or cheese? or feeding veal?

A. The total produce of the milk is sold wholesale, and being carried to the Hague in copper vessels, immediately after the cows are milked, is retailed there by the purchasers.

Q. 3d. What is the most profitable management?

A. For those within reach of great towns, the most profitable mode is to sell the milk;—but for those at a distance, the making of hutter and cheese is more productive.

Q. 4th. What quantity of milk is given by one cow, by the day, the week, the month, the year, upon an average of twenty cows?

A. Forty cows well fed, and well taken care of, may give from 200 to 250 pints of milk* by the day, during the entire year.

According to the calculation of the Commission of Agriculture of the Province of South Holland, one good cow produces 78 lbs. of butter, and 180 lbs. of cheese, in the six summer months.

Q. 5th. How are the cows fed in summer and in winter?

A. In summer they feed in the pastures day and night: in winter, they are fed with hay, turnips, carrots, grains from the breweries, cakes of linseed, bean-meal, &c. &c.

Q. 6th. What is the best age for a bull, and why?

A. A bull well kept, well fed from a calf, and of good blood, is fit to serve cows generally at one and a half, or two years old; and this is considered the best age, as those more advanced are heavy and wicked. The cow served by an aged bull is more likely to miss being in calf; and if impregnated, is more liable to suffer inconvenience with respect to the fœtus.

Q. 7th. At what age are the bulls sold or dismissed?

A. At the age of two, or two and a half years, they are replaced by younger bulls.

Q. 8th. Is it an advantage that the tails of cows should be tied by a chord, and raised high up? and why?

A. Cleanliness requires that their tails should be fixed in this manner, otherwise they acquire dirt, and communicate it to the milkers.

Q. 9th. How is the butter made? with the entire milk, or only with the cream?—Is it sometimes saved with sugar and saltpetre?—Is it washed?—How is the butter-milk consumed?

A. In the greatest part of Holland, they make butter of the cream only: they wash it very much, and save it with salt. There is a great demand for butter-milk—what is not sold, serves to fatten pigs, and to feed calves.

Of the skimmed-milk, they make cheese with a material called *Komyude Kaas.* In some parts of Holland, where less butter is made, they make a rich cheese with the entire milk.

Here terminate the answers of Mr. Van de Poes, which relate to the dairy. In the Island of Cadsand, a gentleman very willing to communicate, but not versed in that kind of information, mentioned generally, his having remarked, that in the dairying districts, the best kept cow-stables, were strictly attended to in point of cleanliness and temperature. He spoke of having drank coffee with the cow-keeper in the general stable, in winter without the annoyance of cold, of dirt, or any offensive smell.

In Flanders, they preserve in their cow-stables the temperature of the month of May.

In Mr. Roper's well-conducted establishment, in Ireland, consisting of nearly two hundred cows, the thermometer is kept at sixty degrees, and it is considered, that any variation from that temperature tends to reduce the quantity of milk.

The Reporter regrets extremely, that he had not the opportunity of detailing from personal inspection, the practice of the chief dairies in Holland.

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* *This, on an average of the Flemish pints, of different districts, would be* 121 *quarts English per day, which, from forty cows, would be but about three quarts from each cow. This, even for the year round, seems but a trifling produce. The reporter is not aware whether there is any difference between the pint of Flanders and that of the Hague.*

ON THE PLANTING AND CULTIVATION OF ORCHARDS.

From that valuable work, Coxe *on Fruit Trees.*

The first thing to be determined upon in the planting of an orchard, is the proper distance of the trees: if a mere fruit plantation be the object, the distance may be small—if the cultivation of grain and grass be in view, the space between the trees must be wider: at thirty feet apart, an acre will contain forty-eight trees; at thirty-five feet, thirty-five trees; at forty feet, twenty-seven trees; and at fifty feet, about eighteen to the acre—these are the usual distances. In my own plantations, I have adopted the various distances according to the depth and character of the soil; about two thirds of the ground, comprizing about one hundred acres, are planted at 50 feet; on the remaining fifty acres, I have tried 30, 35, and 40 feet; and as far as could be conveniently done, I have planted the trees of smallest growth on the lightest soil: taking every circumstance into consideration, it will probably be found, that forty feet is the most eligible distance for a farm orchard.—It will admit sufficient sun and air, in our dry and warm climate; and until the trees shall be fully grown, will allow of a profitable application of the ground to the cultivation of grain and grass.

Much trouble will be saved, and much accuracy in planting will be ensured, by marking the sites of trees by stakes, previous to digging holes. In shallow soils, I would recommend making the holes of the depth of two spits of earth, scattering the lower spit at some distance; and supplying its place by an equal quantity of the neighboring surface earth—the depth of the hole must depend upon that of the sub-soil.

An eligible mode, which I have practised with success in a large portion of my orchards, on the lighter soils, is to supply the place of the stratum of poor earth, by one or two loads of meadow mud, ditch banks, or good surface soil, laid round each tree after planting; ploughing the ground for a fallow crop the next spring, when the mud has become completely pulverised by the frost: the size of the hole should be sufficiently large to admit a spade handle, when laid horizontally in the bottom; affording ample space for the expansion of the roots in loose rich earth. Well digested compost is useful round newly planted trees, in stiff or cold soils—both lime and fresh stable manure, I have found prejudicial in the dry and hot weather of summer; the latter substance is also frequently a cover for moles and field mice, which are extremely injurious in winter, to trees of even six or eight years old in light soils. I have found great benefit from the application of every kind of manure on the surface, and mixing it gradually by cultivation with the soil, as the best security against drought in summer, and vermin in winter.

The proper season for planting, will be found to depend on a variety of circumstances—in light soils, the winter settles the earth round the roots, and best secures them against the drought of the following season—it is a time of leisure to the farmer, and affords an early selection of trees from the nursery. In stiff or wet soils, I should give a preference to spring planting, other circumstances being equal—I have planted at both seasons, and have generally found that care and attention ensured a correspondent success in the growth of my trees. In whatever season an orchard may be planted, too much attention cannot be given to extend the roots in every direction; to cut off all wounded parts, and more especially, not to plant too deep; this I believe is the common error of inexperienced planters: as a general rule, I would recommend that the tree be placed in the orchard with about three inches of earth over the upper tier of roots, which will make it about two inches deeper than it stood in the nursery; that the tree, after being partially covered, should be well shaken, to admit the finer particles of the earth among the fibrous roots, and that it be well settled by treading the earth around it—with these precautions, I have never found the necessity of stakes. The tops of young trees should never be shortened, lest it should produce a growth of suckers: I would recommend in preference, that they be thinned, if found too heavy: if the trees have been long out of the ground, and the roots have become shrivelled at the time of planting, the labor of pouring a pail full of water round each tree, will be amply repaid in the success it will ensure in their growth.

The looser the ground is kept for the first, and indeed for several succeeding years, the more certain and more vigorous will be the growth of the orchard—in the luxuriance and color of the foliage of contiguous plantations, I have found every stage of cultivation strongly marked: those orchards which have been two years under cultivation, exhibit a striking superiority over those which have been but one year under the plough; while these, in their turn, surpass the fields in clover or in grain, both in the quantity and size of the fruit: when clover is sown in young orchards, I have been in the habit of digging the earth for about three feet, at the root of each tree: A man will dig round one hundred trees in a day; the trifling loss of grass and labor, will be fully remunerated by the improved vigor of the tree. When the ground can be spared from cropping, four or five furrows on each side of a row, will be found a most eligible mode of promoting the growth of a young orchard.

All fallow crops are most favorable to the growth of orchards, at every early stage of their cultivation—indian corn, potatoes and vines, are preferable to oats or barley; and these again are more favorable than winter grain: Buckwheat is among the most beneficial crops for the promotion of the autumnal growth of trees—Clover is by many farmers believed to be injurious to young trees; its tendency to check the growth of trees will be found, I believe, to be in proportion to the air and moisture which its greater or less vigorous growth may keep from the roots; light and heat, appear as necessary to the roots, as to the branches of trees—clover, while it occupies the ground, must prevent cultivation; so far I apprehend it will be found pernicious, but probably not in a greater degree than any other luxuriant and deeply rooted species of grass, absorbing the moisture, and exhausting the strength of the soil which covers the roots of small trees. In the arrangement of an orchard, both convenience and beauty will result from planting each kind in distinct contiguous rows. Some cultivators pay particular attention to continue in the orchard the aspect the tree maintained in the nursery: I have sometimes adopted the practice, without much confidence in its efficacy; nor can I think it probable, that trees growing in close rows, not much exposed, in the nursery, can by any habit so limited in its duration, be affected by any permanent contraction or rigidity of the bark, or sap vessels, which are the only effects I have ever heard ascribed to the influence of aspect, on the stems of young trees.

The prevalent winds of our climate, are from the north-west: in light soils, their violence will sometimes give an inclination to newly planted trees to the south-east: this may easily be remedied by setting up the trees while young: and when they have attained a large growth, it may be overcome in a great degree, by cutting off the leaning branches, and by freely pruning the leeward side of the tree.

Moss is a plant produced by poverty and neglect; it is very prejudicial to trees, and should be carefully removed: this can be readily done, by rubbing the trees in damp weather with a bone, or the back of a knife; good cultivation will generally prevent the growth of moss—white-washing* the stem, not only cleanses the tree of moss, but destroys many kinds of lice very injurious to fruit trees; it is followed by a cleanliness in the bark after it has been dissolved by rain, and promotes the health and vigor of the tree whenever applied.

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* For reasons against this, and in favour of soap-washing, see American Farmer, No. 50.
Edit. Am. Far.

FROM THE EDINBURGH FARMER'S MAGAZINE.

Experiments in Reaping Barley at different Stages in its progress towards Ripeness.

Some observations lately circulated by Sir John Sinclair, regarding the stage at which it is proper to apply the sickle to corn crops, led to an experiment, of which the following is a detail. As it was conducted on a minute scale, it may not be regarded as very conclusive; but considerable pains were taken in endeavouring to equalise the *criteria*; and such an experiment, perhaps, affords facilities for this which an extensive one might not command, as a slight difference either in the quality of soil, in the preparation of land, or in other obvious circumstances in an experiment on a large scale, might occasion error greater in the one case than what is likely to attend the other.

A particular spot in a field of barley having been selected for the trial, 24 stalks of grain, all as nearly as possible of the same size and state of advancement, were cut close by the ground at different periods; and each parcel, being tied up and labelled, was suspended in a room. The following are the dates of reaping, and the appearances of the plants when cut.

August 11th.—1st, 24 stalks.—The ear pretty well filled, but soft and quite green. The stem and hose also green, and the leaves very partially decayed.

August 18th.—2d, 24 Stalks.—The ear full and plump, but still green, and the grain soft and pulpy, so that it separated from the husk on a slight pressure between the finger and thumb. The stem quite green. The hose withered on the lower joint, but green on the upper. The leaves almost withered.

August 25th.—3d, 24 Stalks.—The ear firm, and with its awns beginning to assume a yellowish hue. The grain doughy, and no longer to be separated from the husk by pressure of the fingers. The lower part of the stems turning to straw color; the upper part still green, or very little changed. The upper part of the hose, on the side towards the sun, changed to straw color. The leaves quite withered.

September 1st.—4th, 24 Stalks.—Awns quite withered. Ear straw color, with a remaining tinge of green. The hose faded, except on the upper joint, where it is still somewhat green. The stem quick, but yellowish at the foot, and, immediately below the ear, *nearly* changed to straw color. The grain still soft and doughy.

September 6th.—5th, 24 Stalks.—A slight tinge of green remaining on the ear. Part of the hose still quick. The stem also quick, but immediately below the ear, *entirely* changed to straw color. The grain still soft, and easily crushed between the finger and thumb.

September 11*th.*—6th, 24 Stalks.—Awns, ear, stem and hose, completely straw color. Grain still soft; but the field, on the whole, in the state of ripeness commonly esteemed sufficient; and accordingly it was this day begun to be reaped.

On the 10th of October, by which time the parcels were properly dried, the grain was carefully rubbed out, and subjected to an operation equivalent to a complete winnowing, each parcel being still kept separate from the others.

The produce of No. 1. was found shrivelled and imperfect, and that of No. 2. little, if at all, superior to what is usually dressed from good grain by the fanner. With regard to these two parcels, it is obvious they were cut when, with a view to weight of grain, reaping would be improper. It is presumable, from their appearance, that they would both vegetate; and it may be desirable to ascertain whether barley, reaped in the state of either of these parcels, might safely be used as seed; because, if so, an evident advantage would arise from the additional value, which the consequent preservation of its juices would give to the straw, while perhaps, as seed, the grain might go as far as when perfectly ripened.

The produce of No. 3. was also defective, being what is termed hungry, and containing a large proportion of light grain; but it was not, upon the whole, of a quality, which would be considered unmarketable.

Nos. 4. and 5. had the appearance of maturity, but contained more light grain than No. 6.; from which it may be inferred, that a crop reaped in the state in which they were, would not, *cæteris parabus*, prove as productive as one reaped in the state of No. 6., although it may deserve to be considered, whether, in a late and precarious season, the benefit is equal to the risk of delay in reaping, after the crop has arrived at the state of No. 5.

The six parcels were subjected to various tests, by measure and weight, with a view of determining their comparative value; and the results appeared to warrant the following statement of their relative proportions.

No. 1.	being	as 40
No. 2.	was	as 59
No. 3.	—	as 77
No. 4.	—	as 91
No. 5.	—	as 89
No. 6.	—	as 95

A greater difference, it will be observed, is noted between No. 5. and 6., than occurs, in a similar space of time, between No. 4 and No. 5; and this may be attributed, partly to an improvement in the weather, which had become more favorable for a week before No. 6. was reaped, than it had been previously, and partly to the accelerated progress towards maturity which it is supposed crops acquire in the latter stage of ripening. It appeared, also, that although No. 6. was proportionally heavier, *upon the whole*, than No. 5., yet this parcel contained a considerable portion of grains equal to the best in No. 6.; so that the superiority of the latter seemed to have proceeded entirely from the improvement of the lighter grains in the period between the 6th and the 11th of the month. If, in that period, high winds, or weather otherwise unfavorable, had ensued, the consequence might have been, to turn the scale in favor of No. 5., and to afford an instance of the danger of delay in reaping, after the more valuable part of the crop has attained maturity.

Stonehaven, October, 1823.

PHILOSOPHY OF ZOOLOGY.

FOOD OF ANIMALS.

Although temperature appears to exercise a very powerful controul over the geographical distribution of animals, yet is likewise indispensably necessary that they be provided with an abundant supply of suitable food. When this supply is deficient in quantity, both the size and shape of the animals are altered. The frame becomes diminished in stature, its symmetry is marred, and its feebleness indicates the scantiness of its nourishment.

The dependence of the geographical distribution of animals on the supply of nourishment, is most conspicuously displayed in those species which are destined to feed on particular kinds of food. Thus many species of insects are restricted in their eating to one kind of plants, or are parasitical on one species of animal. The distribution of such animals is thus dependent on their food.

The same remark is generally applicable to carnivorous and phytivorous* animals. But, in many species, though the restriction is absolute as to the nature of the food, it admits of a considerable range with regard to the variety or kind. Thus, though the lion is restricted to flesh, his cravings are equally satisfied with the carcase of a horse, a cow, or even of man. The hog in general feeds on roots, but it is not confined to those of one kind of plants; hence it can subsist wherever the earth is clothed with verdure.

The seasons exercise a powerful influence on animals, directly, in reference to their temperature, and, indirectly, with regard to the production of their food. Thus, the insect that feeds on the leaves of a particular tree, can only enjoy its repast during that part of the season when this tree is in leaf. How, then, is life preserved during the remaining portion of the year? The resources are numerous. It either exists in the form of an unhatched egg, an inactive pupa, in the imago state, requiring little food, or actually becoming torpid.

The birds which feed on insects in summer, in this climate, are, from the absence of this kind of sustenance in winter, obliged to have recourse to various kinds of vegetable food during that season. Should this change of diet be unsuitable, migration to other districts, where a proper supply can be obtained, becomes indispensably requisite.

In compliance with these regulations, we observe numerous mammalia, birds, and fishes, accompany the shoals of herrings in their journeys; and the grampus and seal enter the mouths of rivers in pursuit of the salmon. The bats, which feed on insects in summer, could not, in this country, obtain a suitable supply of food. Yet the race is preserved, since the same fall of temperature, which is destructive to insect-life, brings on their winter-torpor.

With many quadrupeds, however, and even insects, especially the bee, where migration to more fertile districts is impracticable, and where torpidity is not congenial to the constitution, there is an instinctive disposition to be provident of futurity,—to subject themselves to much labor, during the autumn, when the bounties of nature are scattered so profusely, in heaping up a treasure for supplying the deficiencies of a winter, of whose accompanying privations, the young at least are ignorant. The quadrupeds which possess this *storing* inclination are all phytivorous, and belong to the natural tribe of *gnawers*.

Of all those animals, whose industry in collecting and wisdom in preserving a winter-store, have attracted the notice of mankind, the beaver stands pre eminently conspicuous. The number of individuals which unite, in cutting down timber to supply their storehouse, and the regularity with which they dispose of it, in order to make it serve the double purpose of food and shelter, are equally calculated to excite astonishment. But as we rather wish to confine our remarks to British animals, wherever the subject will permit, we select as an example of this kind of storing propensity, the common squirrel, (*Sciurus vulgaris.*) This active little animal prepares its winter-habitation among the large branches of an old tree. After making choice of the place where the timber is beginning to decay, and where a hollow may be easily formed, it scoops out with its teeth a suitable magazine. Into this storehouse, acorns, nuts, and other fruits, are industriously conveyed, and carefully concealed. This granary is held sacred until the inclemency of the weather has limited the range of its excursions, and consequently diminished its opportunities of procuring food. It then begins to enjoy the fruits of its industry, and to live contentedly in its elevated dwelling.

MAGNOLIA.—MAGNOLIA.

Natural order, Coadunatæ. Magnoliæ, Juss.
A genus of the Polyandria Polygynia class.

[We have received for distribution, another supply of magnolia seed, from Mr. Rowand of Carolina. Our friends are to understand, that these are not seed of the common magnolia, to be found in swampy grounds in Maryland, *that* is the swamp magnolia, *glauca*, sometimes called swamp laurel, or swamp sassafras, a comparatively diminutive shrub, which seldom grows to the height of more than 15 or 20 feet; the magnolia *grandiflora*, is the one described below by Philips, an English author, who has added so much to the stock of elegant literature, and botanical knowledge, by giving us, in the most entertaining form, the natural history of forest trees, culinary vegetables, shrubs, &c.]

Edit. Am. Far

—— ——"Columbus shew'd
The western world to man."

If we except the general deluge and the origin of Christianity, the discovery of America may be considered the most important event that has been recorded since the creation of the world.—It has discovered to us an immense territory of land; a people whose habits and minds were new to us; it exhibited unknown animals, and afforded us vegetables no less novel than numerous. It has had the effect of a new creation; new wants have arisen, and new inventions have sprung up to gratify them.

"Then commerce brought into the public walk
The busy merchant; the big warehouse built;
Raised the strong crane; choaked up the loaded
street
With foreign plenty; and thy stream O Thames!
Large, gentle, deep, majestic, king of floods!
Chose for his grand resort."

Thomson.

The shrubs of the new world have been transplanted into our gardens, and the forest trees of America rear their heads in our woods; whilst, in return, we have planted colonies on the newly discovered shores, who have reared their national constitution and laws with such care, that it may probably be found thriving there in its purity when time and corruption shall have destroyed the parent trunk.

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* *Eaters of grass and vegetables.*

The magnolia *grandiflora*, or laurel leaved magnolia, is a native of that part of America which has been named Florida, from the beautiful plants with which it abounds; and when growing in its native soil, the magnolia is esteemed the most beautiful tree known; it reaches from 90 to 100 feet in height, and is clothed with an evergreen leaf of the most lucid colour on the upper surface, and of a russet tint beneath. The shape is nearly that of the common laurel leaf, but much larger; and being agreeably waved on the edge, it has not the heavy and stiff appearance of the laurel leaf, although the consistency is the same. It is sessile, and placed without order on every side of the branches. The flowers appear from June to September, during which time they perfume the air for a considerable distance round with the most agreeable odour, which at one moment reminds us of the jasmine or lily of the valley, and the next of the violet mixed with the apricot.

During the last summer we saw a fine tree of this description in the exotic gardens of M. Bourseau, *Rue Mont Blanc*, in Paris, which scented the whole of that elegant plantation.

We have also seen a most noble magnolia in the grounds of the Priory, near Ryde, in the Isle of Wight; and which, we were then told, often wafted its delightful fragance to more than half a mile in distance. The flowers are produced at the ends of the branches, and are so large as to measure from seven to eight inches in diameter, and are composed of eight or ten petals, narrow at their base, but broad, rounded, and a little waved. They spread open like a tulip, and have the appearance of white kid leather more than of a vegetable substance. In its native country this tree begins to flower in May, and gives out a succession during the whole summer, so that the woods are constantly perfumed with its odour. The pencil can give but a faint idea of the splendour of this beautiful tree, which defies the pen altogether to describe its charms; its leaves are more glossy than those of the laurel and from nine to ten inches in length, and about three inches in breadth, with a softness on the underside, that gives great variety to the foliage. The young branches are of a fine purplish brown, and whence each spray, for a hundred feet in height, is holding up its petaled vase, as if to offer incense to the sun that nourishes its fruit, a mass of beauty is composed, that rivals the proudest work of man.

The fruit of the magnolia is seated in the flower in a manner similar to the strawberry, which afterwards becomes a strobile or cone, composed of many capsules, each of which, when perfect, contains two scarlet seeds. We are not aware that the fruit has ever matured its seed in this country, though we have seen some old plants that have formed strobiles of considerable size.

This splendid plant received the title of magnolia from Plumier, who so named it in honor of Pierre Magnol, prefect of the botanic garden at Montpelier, and author of several works on plants.

Sir John Colliton is thought to have reared the first plant of this kind in England, at Exmouth, in Devonshire, some time prior to 1737. It was unknown to Mr. Miller, in 1724, when he published the first edition of his Gardener's and Florist's Dictionary; but in a later edition, he mentions that there were a great many plants in England before the year 1739, but the severe winter of that year destroyed most of the young ones. He also tells us, that he had a pretty large plant which was apparently killed by the severe winter of 1739 40, but that he cut it down after Midsummer, and that it shot up again the year following. We notice this circumstance more particularly, because in case of similar accidents, gardeners may not be too hasty in grubbing up the roots. The magnolia is generally injured most by the early frost, as the extremities of the young shoots are then tender.

His Grace the Duke of Richmond has two of the finest standard magnolia grandiflora trees in this country, at his seat at Goodwood in Sussex, one of which at six inches from the ground, girths three feet one inch, and at four feet from the ground, two feet five inches; at about five feet from the earth it divides into branches, forming a very beautiful head about twenty-three feet in height. The other is thirty-five feet in height, and measures four feet in circumference at fourteen inches from the ground: these trees flower abundantly every year. The time of their having been planted cannot be now correctly ascertained.

The magnolia should occupy a situation sheltered from the north and north-east winds, but fully exposed to the south or south west sun. It seems to thrive in the sea-air, when the situation is not exposed; and the soil congenial to this tree is a deep rich loam, rather dry than moist.

From the great rarity and extreme beauty of this tree, we think it deserving of more care than is generally bestowed on it, so as to secure it from the frost, and which might easily be done by placing blocks of wood in the earth, with mortices in them, into which poles might be fixed, and a frame or wire-work thrown over, to lay mats or other covering on during the inclement nights. Tall evergreens, of the darkest foliage, form the most proper back ground for this tree.

Our nurserymen raise these trees from seeds, which are sown in pots, and plunged into old hot beds of tanners' bark.

We have now eighteen species of this plant, nine of which are natives of North America, and nine belong to India, China, or Japan; and should we be able to naturalize them so as to endure our winters in the open air, as the common tulip tree has been made to do, they cannot fail of being regarded as one of the greatest ornaments of the shrubbery.

MISCELLANEOUS EXTRACTS

From late numbers of the London Farmers' Journal, received at the office of the American Farmer.

ANSWER TO X. Y's QUERY.

Castle Hay Park, *Nov.* 5, 1823.

Sir—Having perused your letter in *The Farmers' Journal* of the 3d ult. I beg leave to acquaint you, that any description of *cut* straw will be a good substitute for hay, provided you mix oil-cake along with it. Or cut oats in the straw, and turnips will be excellent feed for fattening beasts, without any thing else.

I remain, Sir,
Your obedient humble servant,
JOHN BROWN.

P. S. Being short of hay in general myself, I speak from experience. Let the cattle have what cut straw, &c. they will eat, three times a day, and drink plenty of water.

METHOD OF CURING THE FOOT-HALT, &c.

Near Banbury, *Nov.* 7, 1823.

Sir—Your having treated so largely on the *foot-halt* in sheep, I shall not trouble you with any remarks of mine, only my mode of cure, which is short. I once had a flock of aged down ewes feeding on pasture, and was quite in *Pastor's* case, having a score bad together, and tried almost all the *nostrums* you have enumerated; butter of antimony, I remember, made matters worse; some *had lost their claws*; at last a person dressed them; in the first place, with a sharp penknife, cut the unsound part from the sound, till the blood starts, then take a small pot or oyster shell, put a small quantity of *sweet oil*, add a few drops of *oil of vitriol*, more drops or less of vitriol, according to the badness of the foot; stir up the oil and the vitriol together with a flat stick directly spreading it over the part affected; the mixture is best made fresh for every foot; after dressing turn them upon dry pasture; if not at hand in a dry hovel, &c. for an hour or two; after a week or ten days, look them over again; those that are not quite well, dress as above directed, and you will find them cured.

As several of your correspondents complain of a distemper amongst their pigs, I have annexed a receipt of an uncle of mine, who was in the farming line upwards of fifty years:—"For the garjet in hogs—madder 1 oz.; diapente ½ oz.; turmerick ½ oz.; brimstone ½ oz." This is sufficient for a large hog; little pigs, three, four, or five.

If you think these worthy of insertion in your valuable Journal, they are quite at your service.

I remain your constant reader.
A FARMER.

☞ To *start the blood* can be of no service.—Our correspondent may observe that his oils differ but little from the composition we proposed. *Train oil* is recommended for cheapness; for from the decomposition which takes place with the vitriol, the mixture becomes precisely the same.—*Edit. Lon. Far Jour.*

RECEIPT FOR POISONING RATS AND MICE

Haigh Hall, near Wakefield, *Nov.* 7, 1823.

Sir—In consequence of many enquiries lately made as to the best mode of preserving corn stalks from vermin, I beg you will insert in your Journal the following receipt for poisoning rats and mice, which was purchased of the renowned Mawson, of Eckup, near Leeds, for £10, and is now used with great success by several persons who get a good livelihood by it, in the neighborhood of Leeds, Wakefield, Pontefract, &c.

For enticing rats and mice—take ten table spoonsful of oatmeal and one table spoonful of common raw sugar, which must be well rubbed together with a piece of wood, and laid three nights on the decline of the moon on bits of slate, where these vermin frequent. On the fourth night the poison must be laid, which is as follows:—Take ten table spoonsful of oatmeal and one of raw sugar as before, and rub it well together; then add two table spoonsful of white mercury in powder, which must be very well pounded together a second time; then put a table spoonful of clean water into a bottle, and drop it regularly over the whole, and mix it again, a third time, very well together; the water is merely to take off the dustiness of the mercury, which gets into the nostrils of the animals and prevents their eating it.

It is advisable to confine dogs and other animals the night the poison is laid, and to take it away the next morning, to prevent accidents. The poison should be kept in a bladder

I remain, Sir, your's truly,
JOHN WOOLLIN.

Polar Expedition.—We understand it is in the contemplation of the Admiralty to commission the Discovery Ships for another voyage to the Polar Seas, with this difference, that their route is now to be by Behring's Straits, whence they will sail eastward. The distance which must be traversed before they can well be said to commence proceeding to the object of their mission, and the consequent difficulty of reserving the necessary supplies, has hitherto been the obstacle to the attempt by this passage. This latter impediment it is now proposed to obviate, by sending a supernumerary vessel, laden with necessaries, which will probably accompany them, to the neighbourhood of the Kamschatkan coast. Captain Parry is again to take the command.

Etiquette.—Barrow states, that the visiting ticket sent by the Governor of Pe-tche-lee to the British Ambassador, was crimson paper, and of such dimensions, that a room of moderate size might have been papered with it!

God and my Country.—The common question asked a criminal, viz. How he will be tried? is improperly answered, says Barrington, in his work on the statutes, *By God and my Country.* It originally must have been *By God or my Country*—that is, either by *ordeal* or by jury; for the question asked supposes an option in the prisoner, and the answer is meant to assert his innocence, by declining neither sort of trial.

ON A WONDERFUL VEGETABLE.

Somersetshire, Nov. 15. 1823

Sir—A constant reader of your valuable Journal copies from the *Bath Journal* the following account of Cæsarian kale:

"This valuable and most excellent vegetable will soon rank high in cultivation and esteem, there being no species of vegetables in this country resembling this prolific plant during the winter, particularly in severe frosts and deep snows.—When other green fodder for cattle cannot be had, this plant, from its elevation, growing to four or five feet, and its natural hardness, yields abundant and successive supplies, which is an important desideratum. The mode of using it for cattle is, by cutting off the large leaves as wanted, when a regular succession takes place continually through the winter. Very early in spring, previously to most other vegetables, it produces vast numbers of large delicious sprouts for the table, equal in sweetness to asparagus, so that it may be said to produce two crops. Cows fed on this plant give a greater quantity of milk, and the butter is richer than when fed on any other vegetable: a matter also of great utility is, that of its comforting and cheering qualities in feeding of ewes in winter, whilst suckling house lambs. Culture—sown in spring or beginning of summer, broadcast, and transplanted at the distance of about two feet. When sown with turnips, it answers an admirable purpose, as few crops are more subject to fail than that of turnips; whereas, Cæsarian kale may be depended on; it is so prolific and hardy that it will vegetate in almost any soil or climate, and prosper even in the shade of fruit or other trees."

If we can rely on the above account, it deserves attention; but I, as one of your numerous readers, who believe nothing authentic on such subjects but what comes from you, beg your account of it and its best mode of culture.

I am, Sir, a well wisher to your useful Journal,

B. M.

QUERY ON FEEDING BULLS.

Somersetshire, Nov. 12, 1823.

Sir—Several of my acquaintance who have procured high bred bulls, of *different* breeds, having had cause to complain of their want of issue, have learned, that it is from the bulls being highly fed on *Corn* and *Turnips* (as they mostly are when made up for sale.) I shall be glad to be informed if the same disappointment will happen from bulls highly fed on *oil cake*, particularly yearlings?

C.

ANSWER TO THE QUERY ON FEEDING BULLS, SIGNED C.

London, Nov. 21, 1823.

Sir—It is not the quality of food that is given to bulls, which prevents their having issue, but an unfortunate obstinate perseverance in the *in-and-in* system of breeding, which has been carried to the most fatal extent, particularly in what are called "*improved short horns:*" all sprung, male and female, from Mr. Charles Collings' bull *Favourite*, and continued through his descendants from the year 1794 to the present time. (See Coates's herd book of short horned cattle.) The weakness of constitution, and consequent great mortality of calves, at this time, may, as assuredly, be attributed to this cause.

I am, Sir, your humble servant,

JOHN HALL,

Of Little Marshall, near Exeter, a Breeder of Sockburn short horns.

Oil Gas.—At a meeting of the new Gas Company at Edinburgh, on Thursday se'nnight, Sir Walter Scott said, that he had now had three months' experience of oil-gas light in his house at Abbotsford, and he could assure the meeting that nothing could be more pleasant, more useful, safe, and economical. He was sure the expence was not the twentieth part of what it had formerly cost him for oil and candles. The light itself was greatly superior, was extremely cleanly, saved much trouble to servants, and did not produce the least smell, or the least injury. Not only could it be used in kitchens and dining-rooms, but it was extremely useful in bed-rooms, where a flame could be kept up during the whole night so minute as to be scarcely perceptible, which could be enlarged to a powerful light in an instant at any hour when wanted. It was also very safe, at least was much safer than common lights, it was not carried from place to place as common lights were; and unless combustibles were brought to it, no danger could arise. The light was indeed, so convenient, cheap, and delightful, that were it once introduced, he was convinced it would be used within two years, in every private house in Edinburgh.

FACTS RELATIVE TO FELLING TIMBER.

TO THE EDITOR OF THE AMERICAN FARMER.

Brookville, 3d month, 5th, 1824.

Dear Sir,

In the latter end of the 8th mo. (August,) 1820, I cut two gum poles, say about two inches in diameter at the but end, for the purpose of sighting, in laying off furrows in my rye field, to sow grass seeds and plaster by. When the work was done, the poles were left where last used, and one of them at least fell, on a rich spot of land, where I suppose, during the growth of grass and weeds around it the following summer, it was placed under circumstances as well calculated to rot, as could well be.

Nearly twelve months after, that is in the early part of the 8th month (August,) 1821, I was passing by the spot, and took it up, when to my astonishment, I found no appearance of decay about it, not even in the bark. I then laid it on the fence, and immediately set to work, and cut about fifty poles, of which there was an equal proportion of gum, white oak, black oak, and spanish oak, and hickory; these poles would average about seven or eight inches in thickness at the but end, and perhaps, about thirty five feet in length, and were laid on what we call a trunnel fence, as riders.

I continued to examine the small pole, first spoken of, frequently cutting it with my knife, and trying to break it by holding one end of it in my hand, putting the other on the ground, and placing my foot in the middle. But it remained perfectly sound, until sometime during the last summer. I brought it to the house, for the purpose of showing it to some of my neighbors, to whom I had spoken of the circumstance, and where it was ere long, transferred from the place where I had lodged it, to the kitchen fire, or the oven, which circumstance I very much regretted, as I cannot so soon know how long a gum pole will last, when cut at that season of the year.—It is now time to say, that the large poles cut in the 8th month, (August,) 1821, all appear to be perfectly sound, even the bark seems to have suffered little or no decay, and is in many instances leaving the wood so hard, that it is a curiosity. The bark on some of the poles gives them a singular appearance, detaching itself at one point, and curling round, forming something like small hoops. The hickory has suffered a little by the worm, but none of the rest. If these remarks are considered worthy of notice, so far as to be worth publishing, and should in that event, induce others to make further experiments on this, (as I conceive,) important subject, I have no doubt, but discoveries will be made, which will prove valuable to many of us.

AMOR PATRIÆ.

[The whole case is confirmatory of the facts and opinion advanced by Col. Pickering, as to the best time of felling timber, with a view to its durability. Yet the general impression is, that timber, cut when the sap is up, will speedily decay—and the practice accordingly is, in most cases, to cut timber in mid winter—in the "dark of the moon in February," where durability is an object. Our surprise is, in this case that decay was not greater, in consequence of leaving the bark on. But why has not the writer, who is an observing farmer, and not afraid of the labour, taken the pains to cut other poles of the same wood, and of the same size, at *different seasons* and subjected them to the same temperature, and the same exposure? that would at once lead to the establishment of certain facts from which useful and practical results might be drawn.]

Edit. Am. Far.

TO THE EDITOR OF THE AMERICAN FARMER.

MANUFACTURES.

Sir—With respect to manufactures, and your correspondent *Ruris Consultus*, or some such unfarmer like name, I must let you know, that I am a practical farmer of a thousand acres, and was a manufacturer of some thousand yards per annum. of homespun, till the effect of the *financial* tariff of 1816, cutting the nation, (farmers, merchants, and all,) over the backs of the poor manufacturers, *cut* me out of $20,000, in a few years afterwards—put my building and machinery,* in "dry dock," to rot—and sent my 300 head of merinos to bleed and die, for the good of the *treasury!* And though my motto has been that of the brave and persevering Lawrence, using the French pronunciation, "dont give up the *sheep*," yet I have scarcely crooked horns enough left, should the new tariff set me "a wool gathering" again, to begin a flock with.—I was fool enough to think, that

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* *The windmill*, that goes by water,"—*Hon. J. Randolph.*

Genius and talents, often fail,
But perseverance will prevail.

And had I not *tacked ship*, and left John Bull victorious, I should have gone to "Davy Jones' locker," like poor Lawrence himself. Indeed, it almost broke my heart, any how, to see that though we could mawl him on the ocean, our helmsmen (rather landsmen) would let him murder us in our workshops, and nearly starve us on our farms.

You published a few weeks back a wee extract from "the Crisis," addressed to president Monroe. If your correspondent will read that pamphlet, it may save him much ink-shed, for he appears to me, to write more to convince himself, than others. If he has read it, and will still write on, I am sure, it would be useless for me to attempt to stop him.

I hope, Mr. Editor, you will publish this, because it is *original*, though I fear you may consider the style as *too original* for the gravity of your useful and instructive columns.

PHILO-HAMILTON.

Frederick County, Md. Feb. 22, 1824.

"*Wild Geese.*—When wild geese are tamed, they will join with a flock of domestic geese, but at the usual time of migration, are very apt to join any flock which approches near them in their passage."—*Williamson's Hist. Vt. p.* 136.

A number of years since, a farmer in Massachusetts shot at a flock of wild geese that was passing over to the south, and broke the wing of one of them. He kept and domesticated the goose, until it was apparently as tame as any one from our common flocks. The ensuing spring he neglected to clip her wings, and she flew away in a flock that was passing to the north, and he conceived her lost. The next autumn, however, when a very large flock was returning to the south, eleven detached themselves and alighted in the farmer's yard. They proved to be one old and ten young ones. The old was the same that left him in the spring.—*Hartford Mercury.*

Vegetable Milk.—In addition to the vegetable bread, vegetable butter, and cabbage tree, which have been brought to light by recent travellers, we now learn by the *Gazette de Santa* of the 25th July last, that M. de Humboldt has discovered in that region a tree which abundantly affords a milky juice, similar in its properties to the milk of animals, and employed for the same purposes. This liquid, which was drank by Humboldt, is stated to be derived from the *palo de leche, or da vaca*, a tree which grows, abundantly in the mountains above Periquitto to the north-east of Maracay, a village to the west of Caraccas. The milk possesses the same physical qualities as that of the cow, with this only difference, that it is a little viscous: it has the same taste also as cows' milk.—*Ev. Post.*

Fire proof and Water proof Cement.—To half a pint of milk put an equal quantity of vinegar in order to curdle it, then separate the curd from the whey and mix the whey with the whites of four or five eggs, beating the whole well together; when it is well mixed, add a little quick lime through a sieve, until it has acquired the consistence of a thick paste, with this cement broken vessels, and cracks of all kinds may be mended. It dries quickly and resists the action of fire and water.

Blankets,—Took their name from Thomas Blanket, who established the first manufactory for this comfortable article at Bristol, about the year 1340.

Vinegar.—The vinegar manufactured by all the great establishments in London is made from malt. Most of the vinegar consumed in Paris and indeed throughout France is extracted either from wood or potatoes.

In the tenth century, Gregory V. excommunicated Robert, king of France, and such power had the Pope in those days that the king was forsaken by all his courtiers, and even by his confidential domestics, there only staid with him two servants, who threw into the fire what he left at his meals, from the horror they felt at what had been touched by an excommunicated person.

Catnip poultice, good for obstinate ulcers.—The way to make a poultice of it, is to put it on in vinegar, and boil it until it becomes soft, then thicken it with bran, spread a little butter, that has no salt in it, over it, to prevent its sticking.

For a common cold.—Take two or three swallows of molasses, four or five times a day, at bed time drink as much of it as your stomach will bear. This I know from experience, to be an excellent remedy.

Mammoth Hog.—Mr. John Mail, near Cohocksing, in the Northern Liberties, has fattened and killed a hog weighing 914 lbs. Length from nose to tail 9½ feet, girth 7½ feet.

Mammoth Egg.—A gentleman of this town, whose acute observation has more than once penetrated into the *arcana* of nature, and discovered latent wonders, that might otherwise have remained hidden from the vision of man for ages to come, one day last week, brought into our office a *Hen's Egg*, which weighed 5¼ ounces, and measured 9¼ inches in circumference. It was as large as a goose egg; and we stoutly contended it was such, until the gentleman broke it, with the hope thereby, of convincing us of our error; he did convince us; for on opening the egg, a smaller one, of the size of a common hen's egg, was found within the larger shell. The interstice between the inner surface of the large shell and the outer surface of the small egg, contained a yolk, and the white viscous substance found in common eggs. Whether nature, in her freaks, ever produced the like before, we know not.—*Western Carolinian.*

A wonderful Grain of Wheat.—One grain the first year produced a stem containing 11 ears, each ear averaging 87 grains; the second year produced half a bushel; the third year 20 bushels; the fourth year, 768 bushels, or 96 quarters! This *morceau* is making, with great industry, the circuit of the papers.—A Mr. Labor, of Essex, the grower of the corn, and a Mr. Smith, of Mark-Lane, the voucher of the fact.

A letter from New Orleans, to a gentleman in this city, dated January 21, says, "our cotton and sugar crops have fallen short, and the port is crowded with vessels that are without employments. Cotton is very high, and rules from 13 to 20 cents. Sugar is selling from 6½ to 6¾. Exchange on New York, from 2½ to 3 per cent. discount."

FROM THE NATIONAL INTELLIGENCER.

PUBLIC DEBT OF THE UNITED STATES.

Statement of the Public Debt of the United States, on the first day of January, in each of the years, from 1791 *to* 1823, *inclusive.*

In 1791,	$75,463,476	52	In 1808,	$65,196,317	97
1792,	77,227,924	66	1809,	57,023,192	09
1793,	80,352,634	04	1810,	55,173,217	52
1794,	78,427,404	77	1811,	48,005,585	76
1795,	80,747,587	39	1812,	45,209,737	90
1796,	83,762,162	07	1813,	55,962,827	57
1797,	82,064,479	33	1814,	81,487,846	24
1798,	79,228,529	12	1815,	99,833,660	15
1799,	78,408,669	77	1816,	127,334,933	74
1800,	82,976,294	35	1817,	123,491,965	16
1801,	83,038,050	80	1818,	103,466,633	83
1802,	80,712,632	25	1819,	95,529,648	28
1803,	77,054,686	30	1820,	91,015,566	15
1804,	86,427,120	88	1821,	89,987,427	66
1805,	82,312,150	50	1822,	93,546,676	98
1806,	75,723,270	66	1823,	90,875,877	22
1807,	69,218,398	64			

THE LITTLE PET PLANT.

A Florist a sweet little blossom espied,
Which bloom'd like its ancestors by the road side;
Its sweetness was simple, its colors were few,
Yet the blossom look'd fair in the spot where it grew;
The florist beheld it, and cried, "I'll enchant
The botonical world with this sweet little plant;
Its leaves shall be sheltered and carefully nurs'd.
It shall charm all the world, tho' I met with it first!
Under a hedge!"

He carried it home to his hot-house with care,
And he said, "Tho' the rarest exotics are there,
My little Pet Plant, when I've nourish'd its stem,
In tint and in fragrance shall imitate them,
Tho' none shall suspect from the road-side it came,
Roadum Sidum I'll call it, a beautiful name;
While botanists look thro' their glasses and view
Its beauties, they'll ne'er suspect that it grew
Under a hedge!"

The little Pet Plant, when it shook off the dirt
Of its own native ditch, soon began to be pert,
And toss'd its small head; for, perceiving that none
But exoticks were round it, it thought *itself one*,
As a wild flower, all would have own'd it was fair,
And prais'd it, though gaudier blossoms were there;
But when it assumes hot-house airs, we see thro'
The forcd'd tint of its leaves, and suspect that it grew
Under a hedge!"

MORAL.

In the by-ways of life, oh! how many there are,
Who, being born under some fortunate star,
Assisted by beauty, or talent, grow rich,
And bloom in a hot-house instead of a ditch!
And whilst they disdain not their own simple stem,
The honours they grasp may gain honours for them;
But when (like the Pet Plant) such people grow pert,
We soon trace them to their original dirt
Under a hedge!"

THE FARMER.

BALTIMORE, FRIDAY, MARCH 12, 1824.

☞ The next number will close the fifth volume of the American Farmer, and all those who intend to continue their subscriptions, will be indebted for the sixth volume, according to the expressed terms of subscription, which require the payment in advance. To those who have hitherto complied with these terms, and there are few exceptions, we cheerfully submit, whether we have not faithfully performed our part of the contract. We have kept our eye and heart, steadily on our original design, to amuse and enlighten our readers on the most important of all human avocations and interests—agriculture, domestic economy and internal improvements—studiously avoiding politicks, whether state or national, and other subjects, to which journals, numerous and able, were already devoted, while American agriculture, whether as a science or a practical calling, had not a single advocate.

It is for those who take a pride in their profession, and wish their sons to be, not only successful, but *enlightened* farmers, to say, whether they will uphold a journal, which serves at once, as the repository and disseminator of whatever can give embellishment to the mind, and profit to the labours of those, whose lives are to be employed in the noble occupation of tilling the earth ; and thereby increasing the means of human subsistence, multiplying the sources of comfort, augmenting the means of charity, and diversifying the elegancies of life.

But we do not mean in this number, to put forth what might be called an address to our subscribers. The chief object in taking our pen, was to announce, that we have relinquished the design of raising the terms of the Farmer to "five dollars in all cases," as heretofore intimated. The price will continue as heretofore—that is, to those who take the risk of all casualties, $4 per annum, payable in advance—but those who prefer, as we hope most of them will, to pay $5 in advance, will be entitled to have each paper supplied, which may happen, from any cause, not to reach them in good order, and an agricultural almanack, in the bargain. The almanack, besides the contents of common almanacks, will have recipes, short essays, &c. connected with the farmer's and the *housewife's* duties and business. Those who prefer the payment of four dollars, are assured that the Farmer is *regularly put up* and sent off in *at least as good condition*, and with as much security for its safe arrival, as any paper in the United States, excepting always that invaluable work, Niles' Weekly Register. We are still of opinion that our plan of simplifying the terms by demanding $5 in every case would be justifiable and eligible, but we are aware that *times are hard* with farmers, and *may be worse before this session of Congress is over.*

As some subscribers always withdraw at the end of a volume, we must, and do confidently rely on our old and steadfast friends, to say in its behalf to their neighbours what they may think it merits, and thus enable us at least to "hold our own" until times get more propitious.

* * *

In No. 49 of the Farmer, were given several very useful receipts in domestic economy, without stating the source whence they were derived, except of the first. Upon referring, however, to the "Archives of useful knowledge," the Editor finds that all but the first and last, originally appeared in the 2d volume of that work, and that the first was also copied from it, into the miscellany, from which we took it. This article is an abridgment of one, in the transactions of the society of arts of London. This statement is made by the Editor, from a sense of justice, and because he also thinks it useful to know the sources of our knowledge. The "*Archives*," have been common property with the compilers of miscellanies, in the United States, who have generally and improperly omitted to give credit to the authors, who contributed to fill their pages with useful matter.

ERRATA.—IN THIRD LETTER OF "RURIS CONSULTUS."—In the second paragraph, 1st column, 11th line, instead of "buying," read *busying*.

Four lines from the bottom of the same column instead of "inferiority," read *infirmity*.

In the 3d line from the top of the 3d column, (2d page,) for "consideration," read *consummation*.

ERRATA.—In No. 50—On the management of fruit trees, page 395, last column, 3d line from the bottom, for "mixtures," read *manures*.

Page 396, first column, 9th line from the top, for "walls," read *walks*.

* * *

PRICES CURRENT—CORRECTED WEEKLY.

Wharf flour, $5 62½—Howard-street, do. $5 75—Best family do. retail, $7—Wheat, red, $1 15 to $1 17—Corn, 35 cts.—Rye, 40 cts.—Oats, 28 to 30 cts.—Whiskey, 25 to 27—Butter, inspected, 10 to 15 cts.—Coal, Liverpool, bushel 40 to 45 cts.—Virginia, 28 cts.—Susquehannah, per ton $6 50 to $7—Rice, per cwt. $3 75 to $4—Beef, northern mess, per barrel $10—Cargo, No. 1, $8 to 8 50—do. No. 2, $6—Baltimore prime, $10—Bacon and hams, 10 to 11 cts.—Cotton, W. I. Island, 18 to 20 cts.—Louisiana, &c. 16 to 17 cts. —Georgia upland, 14 to 16 cts. —Alabama, 12 to 13 cts.—Candles, mould, 12 to 13 cts.—Dipt, 10 to 11 cts.—Spermaciti, 25—Feathers, live, 30 to 35 cts.—Fish, herrings, Susquehanna, $2 75—Fall mackarel, No. 1, to 3, $4 50 to $7—Shad, trimmed, $6 to 6 50—Flax seed, rough, per bushel, 70 to 75 cts.—cleaned, cask, $8—Flax, per lb. 10 to 11 cts.—Hemp, Russia, $1 75 ton,—Country dew rot, 7 cts. per lb.—do. water rot, 9 cts.—Hops, fresh, 35 cts. per lb.—Hides, dryed, 15 to 19 cts. per lb.—Hog's lard, 12 cts. per lb.—Lime, per bushel, 30 to 33 cts—Leather, soal, best, 24 to 27 cts. per lb.—do. Eastern tan, 18 to 20 cts.—Lumber, board measurment, cargo prices:—Of the following articles we give the yard prices.—Oak timber and scant. $1 to 1 25—Boards all sizes, $1 50 to 2 —Pine scantling, do. $1 to 1 25—Boards 4-4, $1 to 1 25—White do. 5-4, $1 75 to 2 50—do. co. 4-4, $1 15 to 1 30—do. cl. 4-4, $1 80—Shingles, cyp 18 in., $3 to 3 50—Shingles, junip. 24 do. $7 50 to 7 75—jun. com. $3 50 to 5—Staves, W. O. pipe, $40 to 45—do. hhd. $25—do. bbl. $15 to 17—R. O. bbl. $15—do. hhd. $17—Wool, fleece, merino full blood, 35 to 40 cts. per lb.—Cropped, 28 to 30 cts.—Common country, 20 to 30 cts.—Skinner, 35 to 40 cts.—When assorted and cleaned, any of the above will obtain an advance of 15 to 20 cts.

Prices of Seed.—Or hard Grass per bushel, $2 50—Lucerne, do. do. 50 cents—St. Foin, do. do. $7—Red Clover, do. do. $5 50—Timothy, do. do. $4—Herds Grass, do. do. $2—Millet, do. do. $1—Mangel Wurtzel, do. do. $1 50—Ruta Baga, do. do. $1.

Retail prices of provision market—Beef, prime pieces, 10 cts.—Veal, 10 cts.—Mutton, 5 to 7 cts.—Turkeys, 75 cts. to 1—Geese, 50 to 56 cts. —Ducks, Canvasbacks, $1 25 to 2—Red heads, 50 to 75 cts.—Chickens per pair, 50 to 62½ cts. —Eggs, 12½ cents—Butter, first quality, 20 to 31 cts.—Turnips, per bushel, 50 cts.—Potatoes, do. 50 cts.

Agricultural Implements.

Charles B. Palmer respectfully informs the public, that he has opened a warehouse on Ellicott and Light-street, seven doors from Pratt-street, where he has on hand and offers for sale, the following articles, principally of his own manufacture:

150 Ploughs of different kinds.

Pennsylvania Bar share ploughs, all wrought iron except the mould-board, and easily repaired by any country smith.

No. 1 or Seed Plough, and 2, 3, and 4 Horse Ploughs with wings, bar of share, and coulter layed with steel—a two horse left hand plough, made in the same manner.

Dagon, or Connecticut plough.—Wm. Hinkse's wrought iron mould board ploughs.

Mr. Wood's Cast Iron ploughs.

Double mould board ploughs, for hilling corn and tobacco.

Shovel ploughs—Sub-soil ploughs—hill side ploughs—Cultivators of several kinds—Beastman's Scarifier.

Mr Eastman's Cylindrical straw cutters—common hand straw cutters with or without treddles—Fans, Sieves, Screens, Wove Wire, &c., Smith's Bellows, Spades, Shovels, Hoes, and all kinds of agricultural implements to suit the seasons—Edged tools of all kinds, made by George Gillingham.

Iron or wood of any implement furnished separately, if required.—Ploughs and implements of all kinds repaired at the shortest notice and of the best materials ; and implements not answering on trial, may be returned uninjured, and exchanged or the money refunded.—A considerable deduction made to those who purchase a large quantity.

Charles B. Palmer hopes by his personal attention and labour to business, to receive a portion of public patronage.

Persons making ploughs in the country, can be furnished with iron at the lowest prices.

CHARLES B. PALMER.

For Sale.

A very fine stallion colt, two years old this Spring. He was got by the Cleveland Bay Horse imported by Mr. Robert Patterson from England, and out of a very fine half blooded mare.

For terms apply to the Editor of this paper.

February 24, 1824.

CONTENTS OF THIS NUMBER.

Singular Disease of Cattle in Ohio—Agricultural Society of Barnwell District, N. C.—On Orchard Grass—Force of Work Horses and Manner of Working—The Answers of Mr. Van de Poes, President of the Commission of Agriculture in South Holland, to questions of the Right Honourable Sir John Sinclair, Bart. respecting the Dairy of Mr. Van de Poes—On the Planting and Cultivation of Orchards—Experiments in Reaping Barley at different Stages in its progress towards Ripeness—Philosophy of Zoology—History of the Magnolia Grandiflora, or Laurel Leaved Magnolia—Miscellaneous Extracts from late Numbers of the London Farmer's Journal : Answer to X. Y.'s Query---Method of Curing the Foothalt---Receipt for Poisoning Rats and Mice---Polar Expedition---Etiquette---God and my Country---On a Wonderful Vegetable---Query on Feeding Bulls---Answer to the Query on Feeding Bulls, signed C.---Facts relative to Felling Timber---Manufactures---Wild Geese---Vegetable Milk---Fire proof and Water proof Cement---Blankets---Vinegar---Anecdote of Gregory V.---Catnip Poultice good for obstinate Ulcers---For a common Cold---Mammoth Hog—Mammoth Egg---A Wonderful Grain of Wheat---Sugar and Cotton Crops---Public Debt of the United States---The little Pet Plant—Editorial Remarks---Prices Current---Advertisements, &c.

AGRICULTURE.

Communicated for publication in the American Farmer.

Jonathan Roberts, Esq. President of the Pennsylvania Agricultural Society.

Powelton, November 28, 1823.
Philadelphia County.

Dear Sir,

I enclose certificates showing that sixteen hundred and thirty-four bushels of Mangel Wurtzel, weighing seventy-eight thousand four hundred, and forty-eight pounds, were produced at Powelton, upon one acre and fourteen perches of farm land, accurately measured by a regular surveyor.

I selected a parallelogram, containing thirteen contiguous rows, which were drawn, and measured in my presence, to ascertain the largest quantity, which had grown upon the richest part of the field. One hundred and forty-three baskets, equal to one hundred and seventy four bushels, were produced upon thirteen and an half perches, at the rate of two thousand and sixty-five bushels per acre, weighing 44 tons, 5 cwt. 0 qrs. 27 lbs.

I am satisfied that the account of my farmer is correct, and as the roots had been drawn ten days, had been closely cut beneath the crowns, were dry, and entirely free from dirt, both the measurement by the basket, and the estimate by weight, must be fair. If a barrel had been used, or any other large vessel, of *similar shape*, the crop would appear greater, as the measure would not have been so often filled, and consequently *not so often* heaped.

Mr. Milnor, the Recording Secretary, was good enough, to superintend the measurement of the basket, and saw the manner in which it was filled.

I submit to you, the shingles containing the original scores, and refer you to him, for corroboration of the facts. It may be well to state, that however great this crop may appear, in England a larger product has been obtained.

My soil was not naturally strong; it has been gradually so much deepened, as to enable me, with Wood's plough, No. 2. drawn by four oxen, to plough fourteen inches deep. Fresh barn-yard manure, was equally spread upon the surface, and ploughed under in the early part of April, in quantities not larger, than are usually applied, to potato crops in this county. Early in May the land was twice stirred with Beatson's scarifier—harrowed—rolled—after stirred—harrowed and rolled again in the opposite direction. The holes for the seeds, were made by a wheel containing pegs in its circumference, which penetrated the ground, about an inch, leaving intervals of four inches—the rows were made two feet asunder—two capsules were dropped into each hole—the wheel of a common barrow was passed over them, thus compressing the earth, and leaving a slight rut, for the retention of moisture.

A small cultivator which I had contrived for the purpose, was drawn between the rows soon after the weeds appeared; a three inch triangular hoe, removed the alternate plants, leaving the others at distances, varying from eight to twelve inches asunder. The cultivator was twice used before the 20th of July. The heavy rains of August made another hoeing necessary, and surcharged the ground so much, with moisture, that roots increased much less in that month, than they had grown during the same time, in the two last years.

In order to convey an idea of a Mangel Wurtzel crop, to some of the members, who are not acquainted with its usual product, it may not be improper to state, that three fourths of the root extend above the ground—that I last year obtained one which at Mr. Landreth's shop weighed some days after it was drawn, 17 lb. 10 oz.

I this year desired smaller roots which might grow so closely, as by their leaves, to protect the soil, as much as possible from the exhalations of the sun. My cultivator, by its peculiar form, enabled me to cut off the weeds, when the plants were so young, that if I had applied the plough, their crowns must have been covered in many instances, by earth which occasionally falls from its land side. The failure, which attends the cultivation of most root crops in drills, proceeds from the neglect of weeds in their early stages. Four or five days of delay, frequently make the difference of fifteen days in the labour of making clean an acre of ground. The same weeds which a boy with a sharp shingle, could remove at the commencement of one week, may, before the end of the next, require the application of an implement drawn by an horse.

I ascribe my success, in great measure to the use of *Wood's extraordinary plough*, which enters the soil more deeply, and pulverizes it more perfectly than any other I have ever seen with equal force in any country—to the habitual use of cultivators, which complete the production of fine tilth—to the destruction of the weeds on their first appearance—to leaving the smallest space upon which a horse can walk between the rows, and above all to *planting the seeds of a proper kind upon a surface which is kept perfectly flat.*

In proof of the advantages of this invaluable root, I exhibit cream obtained from one of my cows, which has been fed for several weeks, exclusively upon Mangel Wurtzel and Millet fodder. You will find that its color and flavor, are perfectly good—the butter which it affords, is more like that produced in June, than any I have used, excepting such as had been derived from cows fed on carrots, and corn meal.

Notwithstanding the large product, I am confirmed in the opinions, which I have repeatedly expressed, that in *this* country, nothing can supplant the king of vegetables, Indian Corn. I would recommend Mangel Wurtzel, in preference to all other roots, for dairy and breeding farms: and to a limited extent, where labour and manure, are not too dear, in comparison with the value of land, it should be cultivated upon all farms.

The expense of preparation for a mangel wurtzel crop, is not so great as might be supposed.

The labor of four oxen, a ploughman and driver in ploughing one acre, fourteen inches deep,* costs	$3 00
3 stirrings with Beatson's *improved* scarifier, which two oxen managed by one man, can readily pass over five acres in good condition, in one day,	$1 25
2 harrowings and 2 rollings,	1 25
Dibbling with a wheel,	1 00
Dropping seeds, (if performed by men,)	5 00
Pressing them under by a wheel,	1 00
Hoeing and thinning,	15 00
Cleaning with Blockley cultivator, drawn by one horse,	3 00
	$30 50

JOHN HARE POWEL.

John S. Skinner, Esq.

Sir,

At a meeting of the Pennsylvania Agricultural Society, held in November, Mr. Powel exhibited a bottle of cream, produced by a cow, which he stated, had been fed solely on Mangel Wurtzel roots, and millet hay. It was pronounced by all who examined it, to be equal, in richness and flavour, to any they had ever seen.

His Durham short horn heifers, fed upon these roots, yield very large quantities of milk, affording the *richest* cream I ever tasted.

Respectfully your's,
JOHN P. MILNOR,
Assistant Recording Secretary
Penn. Ag. Soc.

Philadelphia County, March 3, 1824.

We have counted the scores, examined William Powell the farmer, and are satisfied, that the piece of land at Powelton, measured by Mr. Henry Serrill, produced thirteen hundred and forty-one baskets of mangel wurtzel, and that the part thereof containing thirteen and an half perches, produced one hundred and forty-three baskets, all the roots having been closely cut below the crowns.

JOHN P. MILNOR,
HENRY SERRILL.

Powelton, Nov. 19, 1823.

I have carefully measured the basket used by William Powell, and referred to in the foregoing certificate, and find, that it contains, precisely one bushel and seven quarts. A basket of this size, wide at top, and of sufficient height, was selected, in order that the beets might be fairly measured, by being placed singly, nearly *perpendicularly*, their necks extending above the sides, upon which others were afterwards laid horizontally, until the usual heaped measure was given; thus leaving as few interstices as possible.

JOHN P. MILNOR.

November 19.

Having measured the above piece of ground, I certify it contains one acre and fourteen square perches. A part of which, containing thirteen and an half square perches, had been staked out in order to ascertain the exact quantity of mangel wurtzel thereon.

HENRY SERRILL.

November 19*th*, 1823.

I have measured the mangel wurtzel, taken from farm land at Powelton, surveyed by Mr. Serrill, and am convinced from the careful manner in which I scored upon shingles with a knife every basket as it passed, from my hand, and as I was checked in my account by the person who assisted me, it is not possible any mistake could arise. Upon one acre and fourteen square perches, thirteen hundred and forty-one baskets were produced. From the piece which had been staked out, in order to ascertain the exact quantity of mangel wurtzel thereon, I took one hundred and forty-three baskets. The strip included thirteen adjoining rows, which were measured from the edge towards the centre of the field without any break.

WILLIAM POWELL.
Farmer at Powelton.

Philadelphia County, ss.

Personally appeared before me, the subscriber, one of the justices of the peace, in and for the county aforesaid, the above named William Powell, who being sworn according to law, saith, that the foregoing statement, is true, to the best of his knowledge and belief.

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* The great depth of ploughing, was noticed by Dr. Buck, the Secretary of the Agricultural Society, at Bridgton, New Jersey, in an early number of the present volume; and we are authorized to assure our much valued correspondent of Talbot, that a Pennsylvania farmer, although no Hercules, can plough fourteen inches, and obtain good crops, without the Augean filth of a great city.—*Edit. Am. Far.*

Sworn and subscribed, this twenty-eighth day of November, A. D. 1823.

GEORGE HOWARTH,
Justice of the peace.

A farm basket, properly filled with mangel wurtzel, was brought to my store, by Mr. Powel and his farmer. The roots alone, weighed rather more than fifty-eight and an half pounds.

DAVID HOOPES.

West Philadelphia, Nov. 28, 1823.

THE AGRICULTURE OF FLANDERS.

[Attracted by the rumours of excellence, in the practices and the great products of Flemish husbandry, and especially by an interesting outline of it by Sir John Sinclair, the Directors of the Farming Society in Ireland resolved to procure a more minute detail of it, and accordingly deputed the Rev. THOMAS RADCLIFF, to make a tour of Flanders, and from personal and particular inspection, to draw up a report on the subject. The duty was, we think very judiciously executed and resulted in a valuable work, published in 1819, from which in our last number, we extracted two articles—one on the forces and manner of feeding work horses in that country—the other, answer to queries, propounded by Sir John Sinclair, respecting a celebrated dairy establishment, of Mr. Van de Poes, President of the commission of agriculture in South Holland.

The report abounds with curious and valuable hints and details, and we shall occasionally extract from it, such as seem most appropriate and useful to the readers of this journal. They will, we think, be gratified with the accounts which follow, of the "MANNER OF FEEDING HORSES AND COWS IN DIFFERENT DISTRICTS."

The "FORMS OF LEASES IN FLANDERS," and a description of the "NEW METHOD OF STEEPING FLAX," will be given in the first number of our next volume. The last mentioned article, will be, at this time, no doubt acceptable, and at all times valuable.]—*Edit. Am. Far.*

From Radcliff's Agriculture of Flanders.

MANNER OF FEEDING HORSES IN DIFFERENT DISTRICTS.

This subject has been touched on in different parts of this Report, and it has been stated, that in some places where hay is scarce, the withholding of that species of provender does not affect the condition of the animal. In the following districts, however, hay is made a part of the forage, and the proportions are as follow:

In the district of *Bruges*—Winter feed, per diem, for each horse, seven litres, being six and one-third quarts of oats; sixteen kylogrammes, thirty-five and one-third pounds avoirdupois of hay. In lieu of fifteen pounds of the hay, thirty-three kylogrammes, (being seventy-three pounds) of carrots. Summer feed per diem, seven litres, being six and one-third quarts of oats; clover in the manger, eighty pounds; four litres of bruised beans are frequently substituted, instead of the seven litres of oats. The drink is water, in which some oil cake has been dissolved, and whitened with rye meal, oat meal, or the flour of buckwheat.

In the district of *Courtray*—Winter feed per diem, fifteen pounds of hay; ten pounds of straw; seven pounds of oats. In summer, clover, in place of hay, and straw; quantity of oats the same. Drink, whitened with rye meal.

In the district of *Termonde*—Summer feed, five months, six sacks, being 927 lb. of oats; one arpent, being nearly one-ninth English acre, clover. Winter feed for seven months, fourteen sacks, being 2163 lb. avoirdupois, oats; 600 bundles, six three-fourth lb. avoirdupois each, of hay; chopped straw and chaff; quantities vary.

In the district of the *Pays de Waes*—Summer feed for five months, the produce of half an arpent of clover; ten hectolitres, being twenty-eight two-fifths Winchester bushels of oats; ten hectolitres, ditto ditto chopped straw. Winter feed for seven months, twenty-one hectolitres, being fifty-nine three-fifths Winchester bushels of oats; twenty-one hectolitres, ditto ditto chopped straw; 4200 lb. of Ghent, being one four-fifths tons English, of hay.

In the different districts a variation takes place in point of regimen; but the object of all, is to keep up the uniform good condition of their working-horses, in which they are universally successful; the operations of the farm never meet with interruption or delay, from the fatigue or debility of the horses allotted for its cultivation.

MANNER OF FEEDING COWS, &c. IN DIFFERENT DISTRICTS.

In the district of Bruges, the mode of keeping cows is as follows:

In *summer*, where pasturage is to be had, they are left at liberty; where this is not the case, each cow is led by a rope, and permitted to feed round the grassy borders of the corn fields, which are left about ten feet wide for this purpose.

In *winter*, the kinds and quantity of food for one cow within twenty-four hours, are, straw, eighteen pound; turnips, sixty pound. Some farmers boil the turnips for them; others give them raw, chopping them with the spade: one or other operation is necessary, to obviate the risk of the animal being choaked, where the turnips, which is usually the case in Flanders, are of toe small a size.

In lieu of turnips; potatoes, carrots, and grains, are occasionally given; bean-straw likewise, and uniformly a white drink, prepared in the same manner as for the horses.

In the district of *Courtray*, very little variation takes place, except in giving about one-sixth less straw.

In that of *Termonde*—The *summer* keep for each cow is nearly an English acre of clover, as soiling.

For *winter*, nearly an English acre of turnips, and one of carrots, with a very little hay and straw; perhaps five pound of hay, and ten pound of straw per diem.

The white drink, as for the horses, is regularly given.

In the district of the *Pays de Waes*—The *summer keep* for each cow is about half an English acre of clover, cut and carried to the stall.

For *winter*, nearly an English acre of turnips, one and a half of carrots, six sacks of chaff; and white water, or *soup*, as it is termed, prepared in the same manner every where, and as is described in the former section, upon the keep of horses.

The precise quantity and kinds of provender given to each animal per day, have been mentioned, as to particular instances, in a former part of this report. The present section states the general practice of the different districts, from the best authorities. From these statements may be deduced the inferiority of the turnip crop of Flanders to that of our countries; they furnish, however, an excellent example of the value and feasibility of the soiling system by the means of clover. In Ireland a prejudice operates against it, from the supposed danger of the fixed air generated in the stomach of the animal thus fed. This, in the worst cases, may be remedied by the flexible tube or the trochar,* but may better be prevented, as in Flanders, by giving the clover in small quantities at a time, and always from that which has been cut at least four-and-twenty hours, that the fixed air contained in the stalk of the clover, may have time to evaporate.

If this excellent Flemish practice of soiling upon clover, with that of saving their own clover seed, could be established in Ireland, the benefit to the farmer of every class, would be incalculable.

The manner of feeding *sheep*, in Flanders, is the same throughout, and has been already detailed. That of feeding *swine*, has also been particularized.

With respect to *calves*, those to be reared for a succession, have very little new milk, and for a very short time, averaging, perhaps, two quarts a day for a month; they are then reduced to buttermilk and water, and have the refuse of the cows' diet, with a portion of their drink, and a little hay.

Those intended for the butcher, as veal, are uniformly kept upon their legs in narrow boarded stalls; they are bled, as is usual with us; are kept particularly clean, and fed abundantly with sweet milk fresh from the cow.

In the Pays de Waes, a peculiar attention is given to this branch of rural economy; and, besides the usual routine, they give them once in the day a mixture of new milk, eggs, and white bread, carefully beaten up and blended. The veal is uncommonly fine and white, and is ready for market after six or eight weeks feeding.

It may be expected that something should be said upon the subject of dairies, but it has been already remarked, that they do not prevail in Flanders on any considerable scale: the chief points respecting them, as to the management of the cows, and produce of milk and butter, have been already mentioned.

Had time and circumstances permitted, the author of this report would have gladly extended his tour to Holland for the purpose of this inquiry. He endeavoured to obtain useful information through a friend, who had connexions there, but did not succeed. The proprietors of dairies in that country, have for the most part an insurmountable objection to communicate the detail of a business in which they have attained a character for superiority, which they wish to preserve; little can be done, except by residence, and personal inspection.

Mr. Quarles d'Ufford, Secretary of the Commission of Agriculture in South Holland, interested himself most politely, in endeavouring to procure some information upon the subject, and transmitted from the president of the commission, some answers to queries put by Sir John Sinclair, who visited the dairy of that gentleman. As Sir John has not noticed them, in his interesting publication, it may be well to let such of them appear here, as relate to the transactions of the dairy.

From Willich's Domestic Encyclopedia.

PRESERVATION OF FLESH MEAT.

Meat can be preserved fresh in hot weather.—1. By covering it with fresh charcoal powder in a cool cellar. 2. By covering it with molasses. 3. By keeping it in a vessel wherein carbonic acid gas has excluded the common air. 4. By folding it in a cloth dipt in vinegar wherein pepper has been infused. 5 By wiping it dry, and enveloping it in melted suet.

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* *The flexible tube forces back the leafy matter which the generation of the fixed air has pressed against the orifice of the stomach, and lets the air escape, which would otherwise expand, to the destruction of the animal. The trochar, a surgical instrument, inserted between the hip and short rib, produces the same effect.*

Under the article BEEF, in the first vol. ample directions were given for salting beef. The following additional account of the result of a successful trial to preserve beef, killed in very hot weather, in August, will be found useful.

The animal fasted a night and day before being killed. About nine o'clock in the evening he was killed, and cut up immediately. At 4 A. M. every piece was quickly wiped, rubbed with finely pounded salt, and instantly put into a barrel in a cool cellar. The next night the pieces were taken out, drained for half a minute, put into another barrel, and the following pickle was poured on them *boiling hot :*

To every two gallons of water were added 40 oz. of salt, and 3 oz. of salt petre. This was poured on boiling hot, 1st. to kill the egg of any fly-blows: 2dly, to corrugate the external fibres of the meat where it is first apt to taint.

N. B. The meat was deprived of all the large bones.

In about a week the meat was taken out of pickle ; the pickle boiled and scummed, and again poured on hot The meat kept perfectly well.

The pickle of meat should be often examined, and once a fortnight boiled and scummed.

The above proportions of 20 oz. of salt and 1½ oz. of salt petre to the gallon of water, is the best proportion for pickling meat for family use.

FLOUR.

The proportion of flour, which a bushel of grain affords, greatly varies. A bushel of Essex wheat, Winchester measure, weighs upon an average about 60 lbs. which when ground, will yield (exclusive of the loss incurred by the grinding and drying,) 45½ lbs. of the flour called *seconds*, which alone is used for baking throughout the greater part of England, and which affords the most wholesome, though not the whitest bread. Beside the *seconds*, such a bushel of wheat yields 13 lbs. of pollard and bran: the total loss in grinding seldom exceeds one pound and a half.

A correspondent of the Editors of the *Encyclopædia Britannica* (Article BREAD,) states, that he weighed two bushels, Winchester measure, of *white* and *red* wheat, the whole of which amounted to 122 lbs. This wheat was ground under his own inspection, and yielded 121½ lbs. of meal, so that the waste or loss in grinding the two bushels, amounted only to *half* a pound.—The meal was also dressed in his presence, and produced 93½ lbs. of *seconds*, and 25½ lbs. of pollard and bran, so that the whole loss in the two bushels, both by grinding and dressing, did not exceed two pounds and a half. The bran and pollard were also dressed in a bolting mill, and produced,

	lbs.	*oz.*
Sharps, . .	6	0
Fine Pollard, . .	5	8
Coarse ditto .	7	8
Broad Bran, . .	5	3
	24	8

One pound only was thus lost in the bolting, and if the sharps had been sifted, they would have afforded three pounds of good flour. We are inclined to think, from these and similar data if the price of wheat were given, that of flour might be easily ascertained, and those frauds which are now practised with impunity, could be effectually prevented.

LIFE.—DURATION OF.

LIFE, in a peculiar sense, denotes the animated state of living creatures, or that space of time during which the soul is united to the body.

Longevity has always been highly estimated by man ; hence the art of preserving life has become an important study, and ought to form part of the education of every individual. There is, however, a period at which mankind cease to grow ; and beyond which our existence continues for a limited time. Thus, if a person attain his full growth at the age of fifteen, he generally dies at that of sixty ; provided that no accidents intervene, by which the vital principle be affected, and prematurely extinguished. According to the calculations of others, every animal body is by Nature destined to live *eight* times the length of its growth.

From the most accurate political accounts, made by comparing the bills of mortality published in different countries and climates, we shall insert the following result:—Of one thousand persons living in large cities, no less than thirty-five or thirty-six die annually : while, in country places, or small towns, only from twenty-eight to thirty deaths happen in a similar period. Among 1000 children, five die during parturition ; and scarcely half that number in childbed ; but about three hundred are computed to fall victims to a perverse mode of education, though suckled by their mothers ; and not less than five hundred, or one half of all that are born, if reared by wet nurses. The mortality of infants, indeed, has increased to a most alarming degree in this luxurious age ; as the plurality of them is carried off by convulsions, and difficult teething. Among one hundred and fifteen dead persons, there is only one woman deceased in childbed ; and, of four hundred mothers, only one by previous pains. A greater proportion of boys than of girls die of the natural small pox.—There are always to be found more aged persons in hilly or mountainous countries, than in low situations ; and it is proved by the most authentic computation, that of 3,125, only one individual survives the hundreth year. From the same source, the following is the most probable chance which persons may have for the duration of their lives, after a certain fixed period ; namely,

	Years.	Months.
A new born infant will probably live,	34	6
A person of 1 year old,	41	9
of 3 . .	45	7
5 . .	46	4
10 . .	44	9
15 . .	41	6
20 . .	38	3
25 . .	35	3
30 . .	32	3
35 . .	29	8
40 . .	26	6
45 . .	23	0
50 . .	20	11
55 . .	17	0
60 . .	14	2
65 . .	11	5
70 . .	8	11
75 . .	6	8
80 . .	4	10
85 . .	3	3
90 . .	2	0

The proportion of the female sex to that of males, with respect to the number of deceased, is as 100 to 108. Previously to the 60th year, the chance of survivorship is in favour of women ; but after that age, men generally survive them. Married women, on the whole, live longer than those in a state of celibacy. From observations made for the space of fifty years, it is evident that most persons die in the months of March, August, and September ; but the fewest in November, December, and February. In populous cities, however, such as London and Paris, death makes the greatest havock during the *winter*.

One half of the human race is doomed to dissolution, before they have completed the 17th year of their age ; but, after this critical period, the survivors' chance of life becomes more valuable with every year : hence, for instance, a person thirty years old, according to the preceding calculation, will probably live thirty-two years longer : so that he may attain the age of sixty-two ; whereas a youth of fifteen, though he have a chance of living forty-one and a half years longer, will neverthless arrive only at the 56th or 57th year of his age.

According to BOERHAAVE, the most healthy children are born in the months of January, February, and March ; indeed, the greatest number of births takes place during the two months last mentioned. The proportion of boys, annually born, is to that of girls, as 104 to 100 ; but, on the other hand, a greater number of the former die during infancy than of the latter ; so that, about the age of puberty, both sexes are nearly equal. Among 65 or 70 infants, there is generally but one instance of *twins*. The number of marriages, compared to that of the whole population of a country, is as 175 to 1000. Four children are generally computed to arise from each married couple ; but, in towns, only thirty-five children from ten families. Lastly, it is proved from the records of the most experienced physicians, that, among 100 persons living in cities, throughout the year, only twenty are indisposed, or confined to their beds for one month ; or twenty-four for the space of a fortnight.

We have already pointed out the most proper treatment of persons in a feeble state, under the article DEBILITY ; and, at the same time, stated the necessary rules and directions for the preservation of health, and consequently the prolongation of life. There is, however, so much justice in the observations of the late illustrious HALLER, on this subject, that we are induced to insert the following brief statement. He remarks, that some of the causes which contribute to protract life, beyond its usual period, are *external*. Such, for instance, is climate : hence, the more northern latitudes, or about 50 degrees, are the most proper for youth ; because, in such a region, the circulation is less rapid, and acute diseases seldom occur. But in a more advanced age, when the pulsations of the heart are faint or slow, and its irritability is diminished, a warmer region is more salutary ; and he recommends aged persons to migrate 30 or 40 degrees, or even nearer to the equator, where they may enjoy, at pleasure, the genial warmth of the sun, or the cooling shade.

Among the *internal* causes of longevity, the rudiments of a sound body, descended from parents uncontaminated by hereditary disease, are to be considered as the principal : thus dropsy, gout, apoplexy, consumption, and the long train of disorders that are too frequently transmitted from one generation to another, will in a great measure be prevented With respect to the mode of living, HALLER recommends abstemiousness during youth ; the drink should be water, which Nature has provided for our common use ; and he justly considers wine as a species of medicine. Animal food should be sparingly eaten, together with a large proportion of vegetables, and but a small addition of saline, or aromatic substances. Temperance is, in every respect, an essential point ; so that the quantity eaten may be well digested, and perfectly assimilated :

that the blood may circulate regularly, and free from all corruption or infection, similar to that of an infant. Aged persons, however, may somewhat more freely indulge in the use of animal food; on the other hand, tranquillity, both of body and mind, is of the greatest consequence; as nothing is more detrimental, than an irritable or irascible disposition. Hence, a due mixture of a lively and placid temperament, is a very desirable condition, so as to be neither insensible of pleasure, nor too much addicted to the gratification of sensual desires. Moderation is, therefore, here likewise a beneficial attribute; but, with regard to sleep, old and decrepid people may be more indulgent. Those readers, who are anxious to become acquainted with more minute rules and directions for prolonging human life, both in a state of health and disease, will derive considerable information from Professor HUFELAND's "*Art of prolonging Life*," and from Dr. STRUVE's "*Asthenology; or, The Art of preserving feeble Life*," in which the subject is amply and philosophically discussed.

From the Compendious Dictionary of the Veterinary Art.

THE DISEASES OF DOMESTIC ANIMALS AND THEIR CURE.

Falling down of the Calf Bed. Inversion of the womb. This accident occurs sometimes immediately after the extraction of the calf, particularly in difficult labours, or when much force has been used in the delivery of the animal. It may also happen from the cleansing remaining in the womb after delivery, which generally causes the cow to lie down and strain. This accident is more likely to happen when the floor of the cow house is lower behind than before; when this is the case, the animal should be removed to another place, or the floor so raised, that the cow's hind parts may be rather higher than the fore parts. If any dust or bits of straw are observed about the womb, they should be carefully removed; and if the placenta or cleansing still adheres, it must be gently separated, before any attempt is made to put back the womb. A linen cloth is to be put under the womb, which, being held by two assistants, the cow should be made to rise, that being the most favourable position. The operator is then to grasp the mouth of the womb with both hands, which will enable him by gently pushing forward, to force that part into the body of the cow; when so returned, one hand is to be immediately withdrawn, while the other remains to prevent the part from falling down again. The hand at liberty is then to grasp another portion of the womb, which is to be forced into the body like the former, and retained with one hand: this is to be repeated until the whole of the calf bed is put back. In grasping these different portions of the womb, it is to be particularly observed, that it must be done by its upper surface, or that lying next the back of the cow: for, if grasped at the under part, it would be impossible to return it, and there would be danger of wounding some large blood-vessel. During the operation, the assistants must be careful to support the womb, and on no account suffer it to hang down. If the cow cannot be made to stand during the operation, the hind parts should be raised by placing some trusses of straw under them. When the operation is finished, the hand is to be thrust gently up to the bottom of the womb, and kept there until the parts have regained their natural situation, which will be known by moving about the hand. When the womb has been properly returned, it seldom falls down again. Some farriers, however, put two or three stitches in the shape as a preventive. Mr. Clater recommends for this purpose, the passing a piece of wire through the "lips of the womb." In old cows, whose parts have been much weakened or relaxed, and where the accident has occurred several times, some expedient of this kind may perhaps be necessary. It would be proper, however, to try first if it could be effected by means of a pessary. After the operation, Mr. Clater, *very considerately*, for he is a druggist, directs an expensive drench to be given, which, in my opinion, is much more likely to do harm than good: *sed utilis est sibi.* Sometimes the vagina falls or becomes inverted, but it is easily replaced: and farriers usually put two or three stitches in the shape to prevent its returning: in this also if the cow is in a stall, she should be made to stand higher before than behind. The only medicine that can be necessary in either of these cases is some laxative medicine, if the bowels are not sufficiently open; and when the straining is so considerable as to render it impossible to replace the womb, an anodyne or opiate clyster should be thrown up, and if this fail, from half an ounce to an ounce of tincture of opium may be given as a drench.

Farcy. This was formerly considered as a disease of the superficial veins, which, in the language of farriers, became knotted and corded. It has been ascertained, however, by Mr. Coleman, that it is an affection of the lymphatic or absorbent vessels. Its most usual form is that of small tumours, or buds, as they are termed, about the legs, inside of the thigh, neck, face, and other parts: the buds are at first hard, but gradually become softer, and at length suppurate and burst, and become a foul ulcer. Between the ulcers or buds there is generally a line of communication, or what farriers term a corded vein is seen, which is, in fact, an inflamed lymphatic or absorbent vessel. When the farcy bud has burst or has been opened, it sometimes spreads under the skin, forming what are termed sinuses or pipes; these should always be laid open with the knife through their whole extent, except when they occur about the joints or tendons, in which case they generally occasion lameness, and are difficult to cure. Sometimes the farcy comes on in a more violent and malignant form: there is a prodigious swelling of the legs or other parts; foul, spreading ulcers appear; the nose swells and discharges stinking matter; there is also considerable fever, and the horse soon falls a victim to the disorder. This malignant form of farcy, however, is not very common. When no remedies are applied, the farcy ulcers usually spread; but by dressing them with caustics, and laying open any sinuses there may be, they gradually heal, and the horse often appears to be cured. This apparent cure may continue from two or three weeks to several months, but it is generally followed by glanders. In some instances farcy is merely a local disease; and in such cases, if proper remedies are seasonably applied, it may be radically cured without being followed by glanders. The farcy sometimes attacks horses that are in good condition, and without any previous illness; at others it is preceded by various symptoms of constitutional derangement. In some cases the horse gradually loses flesh and strength, the coat becomes dry, the skin sticks close to the ribs, and the legs swell. These symptoms are followed by the appearance of farcy buds, and soon after by glanders. When farcy attacks a horse that is in good condition, there is a probability of its being cured by a proper mode of treatment, particularly if the buds are not numerous and confined to the fore legs, without affecting the joints or tendons. Topical applications alone ought never to be depended on, but the following ball should be given morning and evening, provided it does not occasion sickness or uneasiness of the bowels.

Ball for Farcy.

Sulphate of copper (blue vitriol) from one to two or three drachms;
White arsenic and sublimate, of each, from ten grains to a scruple;
Powdered cascarilla-bark, from one dram to two;
Oil of caraway seeds, twenty drops;
Linseed-meal, half an ounce;
Venice-turpentine, enough to form a ball.

When the buds become soft and appear to contain matter, they should be opened and dressed with some caustic preparation; as solution of sublimate in muriatic acid, with the addition of spirit of wine and water, in the following proportions:

Corrosive sublimate, one drachm:
Muriatic acid, three drachms;
Spirit of wine, one ounce;
Water, half an ounce.

First mix the sublimate and the acid, then add the water, and lastly the spirit. This is a strong preparation, and need be applied only once or twice, provided the bud has been completely laid open, so that every part of the diseased surface may be exposed to its action. After this, the sore generally heals of itself. Some practitioners use lunar caustic, powdered blue vitriol, with red precipitate and burnt alum; in fact any caustic preparation will answer the purpose. Blistering the corded lymphatics has also been recommended. The horse's diet should be nutricious, but rather of an opening nature, as bran-mashes, with oats or malt, carrots, vetches, or lucerne: his water should be at the summer temperature, or have the chill taken off. Regular exercise is necessary; taking care to avoid rain and cold winds, and clothing according to the season during the time of exercise. By adopting this mode of treatment at an early period, a cure may often be effected, provided the horse is in good condition, and not previously diseased; but the use of proper remedies is too often delayed until the poisonous matter has been absorbed; and then, though the farcy may be completely healed, and the horse apparently cured, I have generally found that he has eventually become glandered. In some instances, there has been an interval of several months between the supposed cure of farcy and the appearance of glanders. As to the cause of farcy, we only know that it may be produced by inoculating a sound horse, in any part of the body, either with matter taken from the nose of a glandered horse, or from a farcy bud, when first opened, or to which no caustics or other dressings have been applied. It may also be produced by rubbing glanderous or farcy matter upon a common sore on the body of a sound horse; but in this case the disease does not so readily take place; and though the sore generally assumes a different appearance after the poisonous matter has been rubbed on it, appearing at first indisposed to heal, or even to spread, yet, after a short time, it often heals spontaneously, and is not followed by glanders. Farcy sometimes appears in a horse that has for some time been glandered; and if a sound horse be suffered to feed or drink with one that is glandered, the first symptoms of his being infected by such communication will sometimes, but not often, be the farcy. The farcy, however, frequently takes place where there has been no known communication, either with a glandered or a farcied horse; in such cases, the disease is, perhaps, produced by some cause with which we are unacquainted. Dropsical swellings sometimes occur in the limbs, or other parts of horses, which farriers name Water Farcy; but is a very different disease.

From Adams' Medical and Agricultural Register.

A COMPARISON

Between the advantages and disadvantages of Agriculture in Britain and in America. By Robert R. Livingston, Esq.

The first advantage England possesses, consists in her early spring; this enables the farmer to commence his work sooner than he can in this country: to this cause it is owing, that such crops as require early sowing on a well prepared fallow, succeed better in Britain than here. Barley, for instance, requires four good spring ploughings, and yet should be put in by the first of May; this cannot be done here, except upon very light lands, our clays being hardly fit to plough before May; but light land will not produce good barley without manure. In England it may be raised to advantage on strong loams, and even on clay. It is for this reason that barley is nearly as cheap in England as here, though every other grain is nearly sixty per cent. dearer than in America. The same reasoning applies to beans, which are unproductive in England, unless sown in February and March, which is hardly possible here on strong clays, the soil these require. Turnips cannot be raised in our climate to advantage, as a food for cattle; the season in which they are sown being usually very dry, and the plants liable to be destroyed by the fly.

Great Britain has also some advantage over us in the shortness of the winter, but much less than is generally imagined. Their autumn is cold and wet; and though there is some apparent verdure, yet the vegetation is so slow, as to render it usual for good farmers to house their cattle by the first of November, rather than suffer them to poach their fields, in gleaning a scanty subsistence from them; nor do they turn them to pasture till late in April.

These, I believe, are all the advantages that the British farmers fairly claim over us.* Let us now examine those we exclusively possess. The noblest of these is the *maize*, or Indian corn, [which does not grow in England.] Neither the beans* or turnips* of Britain can be compared with this plant. First, it need not be planted till the last of May, so that the farmer is never hurried by it with his spring work. Secondly, it is cultivated with a plough or horse hoe; and as the plants are large, and placed at five feet distance, there is ample room for this; and though it is also usual to hand hoe, yet, as this is done after the ground is loosened by the plough and when the plant is a foot high, and then only just about the stem, it is easier to hoe ten acres of this than one of the turnips or beans. Thirdly, it defies the drought, and never fails to make ample returns to the husbandman that cultivates it with diligence; forty bushels an acre being a common yield when well tended, and from sixty to seventy in a good soil and in the best state of cultivation. The grain furnishes a palatable and nutritious food for man, and is greatly superior to any other species for farm stock. And while bean haulm is of little value, the tops and blades of maize are not inferior, if gathered in season, to the best hay; and as this crop is easily and necessarily kept clean, it is the best of all fallow crops.

The want of turnips in this country, may be amply compensated by carrots, which may be raised at less expense here than in Britain, because we have much fewer weeds, which are the greatest enemies to that root; by cabbages and potatoes, which grow well here; and by pumpkins, which are raised in very considerable quantities in our Indian corn fields, without any other expense than that of dropping a few seeds in the hills and carting the crop. Nor can I help recommending them as a rich and nutritious food, that will save two month's hay, if used in the beginning of winter, and afford milk and butter equal in quantity and quality to the finest pasture.

These legumines would not be so much neglected here as they generally are, were it not that hay is made in this country at half the expense that it requires in the moist climates of Britain. Vegetation there is extremely slow; their spring is nearly one month earlier than ours; yet, though their wheat begins to grow in March, it is not reaped till late in August; ours is cut six weeks earlier, though it does not begin to vegetate till late in April; so that it takes five and one half months in Britain, to perfect a crop which is performed here in little better than three. The same causes influence the growth of grass. In soils, therefore, of equal quality, much less will grow in a given time in Britain than in America, as I infer from the general average of their clover and natural grass in not exceeding ours, though they are longer in a growing state. It is true, that the moisture of the climate, and mild winters, give a great verdure to their fields at some seasons; but this is only an apparent advantage, which deceives superficial observers, while it is attended with real inconveniences; first, the grass itself is by that circumstance rendered less nutritious, as is well known by every farmer; secondly, while the hay is lighter, it is got in at more expense than ours, which is made at the driest season of the year.—In our crops of grain we enjoy similar advantages; their harvests are frequently wet, while nine years in ten ours is got in without the least obstruction from rain. The produce would also, I am well satisfied, be greater here than in England, on highly cultivated soils, since it is well known that the strength of the straw depends upon the dryness of the season. In a moist climate, therefore, without sufficient sun to harden the straw, heavy crops must be very often injured by lodging, especially if we take into consideration, that high winds are much more usual in Great Britain than here. Blight and mildew are effects of a moist climate. These are seldom and partially known in this country, prevailing only in particular districts, in extraordinary seasons. In Britain it often happens, that wet weather, when the wheat is in blossom, affects all the wheat in the kingdom, many parts of which, on this account, do not pretend to raise it.

If vegetation is slower in Britain than here, and if the grass is also less nutritious, it must follow, that with the same attention to stock, our pastures with the best grass, and to keep the cattle out of them at improper seasons, a larger stock may be maintained on the same quantity of ground in this country than in England; and thus the difference in the length of our winter be amply compensated. This observation leads me to a circumstance in British husbandry, which might be advantageously practised by us. Many of their farmers sow rye, for the use of their sheep and lambs, in the spring. In order to do this, they must be at the expense of a fallow; and as their rye grows two fifths slower than ours, it must follow, that they can only keep three sheep where we may have five. If, therefore, this practice is advantageous in England, it would be much more so in America, to sow our corn fields with rye, to feed off with sheep in the spring, not only because of the additional numbers we can keep, but because we are more pinched for sheep food in the spring; besides that the rye that costs the British farmer a complete fallow, costs us nothing but the seed, if sown among the corn when it is topped. As five sheep will leave more manure than three, the rye field so fed down, will be left in better order here than it would be in England.

In the healthfulness of our stock, we have great advantages over Britain. Among our black cattle I have been told that some disorders prevail, though they are so extremely rare, that in twenty years since I commenced farming, I do not recollect to have lost one creature, unless it were by some accidental hurt; nor have I known any others to die among my neighbours, except from the same cause, or bad keeping in the spring; and while the rot sweeps away whole flocks of sheep in Britain, it is a disorder entirely unknown in this country.

All these natural advantages being in favour of the American farmer, I shall be asked how it happens that the lands in Britain are more productive? The answer is, more labor is expended upon less land there; and the product is always in proportion to the labor, the soil, and the climate.

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* *Both these (beans and turnips) are important crops in England, for the feeding of horses, cattle, and sheep.*

MISCELLANEOUS EXTRACTS

From late numbers of the London Farmers' Journal, received at the office of the American Farmer.

Some Account of the Origin of Cards.—Cards were invented by Jacquemin Gringonneur, a painter at Paris, in the reign of Charles the Fifth, King of France. They were first made use of for the purpose of diverting or diminishing a deep melancholy under which that unfortunate monarch laboured for many years; and he is said to have experienced temporary relief and considerable amusement from Piquet, the first game ever played at with cards, if we may rely on the respectabe authority of a French writer, who has composed "A dissertation, symbolical, allegorical, political and historical, on these pictures of human life."

It seems from his account, they were meant to represent, in the rude efforts of those days, particular persons, and sometimes the productions of nature and art.

"The ace," says this author, "is, in fact, only the Latin word *as*, which signifies literally, only a piece of money, but in a general sense, wealth. Aces accordingly have precedency before Kings, and all other cards; for as riches are the sinews of war, the most powerful monarchs submit to their controul, and the great question of peace or war must, in a great measure, depend on the finances and resources of a country.

"*Piques et carreaux*, spades and diamonds, mean arms, the heavy arrows formerly shot from cross-bows, being shaped like diamonds on cards; the inference to be drawn is sufficiently clear, that without arms and courage (under the appropriate typ of hearts) to make use of them, neither life nor property can be secure.

"The kings of the four suites, originally were portraits of David, the son of Jesse, Alexander the great, Julius Cæsar, and Charlemagne, each of whom had his ecuyer, modified into the modern word esquire, and called in the middle ages, valet or knave—titles, in those days, considered as honourable. The names of two distinguished individuals of this rank, the companions of knights and of kings are preserved, Ogier and La Hire, famous intrepid French captains, who would not have suffered any one to have applied the term knave to them in its present signification with impunity.

"Argine, the queen of Clubs, is an anagram formed of regina, and was a representation of Mary of Anjou, wife of Charles the Seventh. The queen of Diamonds, under the name of Rachel, was meant for the beautiful but frail Agnes Sorrel; and the queen of spades, under the semblance of the chaste and warlike Minerva, was the heroic Maid of Orleans; while Judith, the queen of hearts, was designed as a picture of the enchanting Isabeau de Bariere.

"Clubs treffle or trefoil, a herb that grows in the meadows. implies that a general should never encamp without good opportunities for forage."

The figured cards, as king, queen, and knave, were at one time called coat, and not court cards, as at present. The knave probably was intended at first to represent the Prince, or son of the King and Queen, as Chauser twice applies the term knave-child to the son of a Sovereign Prince. Cards, as well as other games had their origin in times of chivalry. The kings, queens, knaves, all carry marks of that period. The present absurd figures stamped on cards seem to be faithful and accurate representations of elegant original ornaments of the reign of Henry VIII.

Herefords and Short Horns.—The following statement has been sent for insertion:—

The Steer bred and fed by the Marquis of Exeter, 2 years 11 months, by a son of Blyth Comet, was sold for £45; the seven steers bred and fed by Mr Charles Tibbits, Esq. under three years old, were sold for £31 each; and £48 was refused by Mr. Champion for his Steer, (3 years and 3 months old, by War ior,) from a butcher, to slaughter him at Deptford. The above animals, it will be recollected, were exhibited at the late Smithfield Show. The weight of Mr. White's yearling Hereford Heifer, shewn at Tredegar, was 12 cwt. 3 qrs. This heifer, being 22 months old, at 12 cwt. 3 qrs., averages not quite 65 lbs. per month; and Mr. Champion's Short-horn, weighing 11 cwt. 10½ lbs., averages near 78 lbs. per month, she being 16 months old at the time of exhibition.

Match for 100 *Sovereigns.*—An interesting race took place on Wednesday morning, made on the preceding evening over some mellow port, at the Turf Coffee house, between Mr. Hewston, late of the Guards, and Gilbert Stanhope, Esq. It was to go on foot twenty miles; and Mr. Hewston backed himself to do his work within two hours and a half, in several bye bets. The match was run on a mile piece of ground leading from Hanwell towards Harrow, and betting was even. Mr. Stanhope cut out the work, and did his first mile in six minutes and ten seconds. It was a very fine race, Mr. Hewston keeping close with his opponent. Both were together at the tenth mile, which was performed in one hour and ten minutes. The travelling pace was a mile in about seven minutes and ten seconds: but in the sixteenth mile Mr. Stanhope fell off his speed, and resigned in the eighteenth. Mr. Hewston kept at work to win his bye bets, and he did so, by accomplishing the ground in two hours and twenty-five minutes, with apparent ease.

Extraordinary Kidney.—A small four-year-old heifer was last week slaughtered by Mr. Mullins, butcher, of Maidstone. Upon opening the animal, one of the kidneys was found to be of an amazing size, the solid suet being computed to weigh at least ten stone, and measures in circumference full four feet. The exact weight cannot at present be ascertained, as the kidney is not yet removed from the side to which it grew. The other kidney was of an ordinary size. The heifer was purchased at Smithfield, last Monday week, and slaughtered on Wednesday. The animal had nothing particular in its appearance previous to being killed.

Advice.—Would a man wish to offend his friends? let him give them advice. Would a lover know the surest method by which to lose his mistress? let him give her advice. Would a courtier terminate his sovereign's partiality? let him offer advice. In short, are we desirous to be universally hated, avoided and despised, the means are always in our power; we have but to advise, and the consequences are infallible. Two young ladies, whose friendship, though apparently founded on the lock of eternal attachment, terminated in the following manner:

My dearest girl, I do not think your figure well suited for dancing, and, as a sincere friend of your's, I advise you to refrain from it in future." The other delighted, as you may well suppose, with such a mark of friendship, replied, "I feel very much obliged to my sweet friend for her advice; and as this fresh proof of her friendship demands some return, I would recommend her to relinquish her singing, as some of her upper notes resemble the melodious squeakings of the feline race." The advice of neither was followed; the one still continued to sing and the other to dance, and they never met but as bitter and implacable enemies.—*Gazette of Fashion.*

To kill Cockroaches.—An infallible means to destroy them will be found in giving them the root of the Veratum Vineæ, commonly called black hellebore, which grows wild in our country marshy grounds, and may be got of our market people. Strew these roots about the floor at night, and next morning you will find all the family of the cockroaches dead or dying, from having eaten it, which they will do, with much avidity. They will never fail to eat it while they can get it, and will as surely die. It causes them to foam at the mouth, and to split in the back occasionally.

* * *

WHAT REVOLUTIONS IN THE MORAL WORLD!!

[When the reader reflects on the numberless associations which have of late years been formed, for the translation into all languages, printing and gratuitous *distribution of the Bible*—that men of the highest rank and power, not excepting *peace loving* KINGS and EMPERORS, have vied with each other in this pious work; until Bibles have become as cheap as almanacks—he will be, as we were, the more forcibly struck with the following anecdote mentioned by himself, in the life of that greatest of philosophers and philanthropists, BENJAMIN FRANKLIN.]—*Edit. Am. Far.*

Our humble family early embraced the reformed religion. Our forefathers continued Protestants through the reign of Mary, when they were sometimes in danger of persecution, on account of their zeal against popery. They had an English bible, and to conceal it, and place it in safety, it was fastened open with tapes under and within the cover of a joint stool. When my great grandfather wished to read it to his family, he placed the joint stool on his knees, and then turned over the leaves under the tapes. One of the children stood at the door to give notice if he saw the apparitor coming, who was an officer of the spiritual court. In that case the stool was turned down again upon its feet, when the bible remained concealed under it as before. This anecdote I had from uncle Benjamin.

PUBLISHED AT THE REQUEST OF THE SOCIETY.

AGRICULTURAL PREMIUMS.

The Farmer's Society of Barnwell District, will award the following premiums of Fifteen Dollars, or a silver cup of that value:

1st. For the best bull, steer, or cow, not more than 3 years old.

2d. For the best bull, steer, or heifer, not more than 2 years old.

3d. For the best male or female calf, not more than 1 year old.

4th. For the greatest quantity of corn, from one acre of high land.

5th. For the greatest quantity of corn, from one acre of either swamp or pond land.

6th. For the greatest crop of root, or slip potatoes, from one acre of either high or low land.

7th. For the greatest crop of rice, from one acre of either high or low land.

Also, premiums of Ten Dollars, or cups of that value.

1st. For the best stud horse, not more than 7 years old.

2d. For the best mare, not more than 7 years old.

3d. For the best hog, not more than two years old.

4th. For the best male or female hog, not more than 1 year old.

Also premiums of five dollars:

1st. For the best ram, not more than 1 year old.

2d. For the best specimen of cotton homespun, not less than 10 yards.

3d. For the best specimen of homespun of a cotton warp and wool filling, not less than 10 yards.

The animals, if not raised by the competitors, must have been owned by them, at least 6 months previous to the regular meeting in January 1825, on which day they must be exhibited to the Society at Barnwell Court House, when the premiums will be awarded.

The acre to be square, and not more than 210 feet square. The crops to be harvested, and measured in a sound and merchantable state.

Whenever practicable, the Society expects some of the members to be invited to attend to the gathering and measuring of the crops. If not, disinterested farmers must attest as to the quality and quantity of the crops, and also state precisely the mode adopted to ascertain the amount of each crop. The corn crop must consist of only one crop, which must not be harvested previous to the 15th day of October next, and the quantity made to be ascertained the day gathered from the acre.

JOHN S. BELLINGER, *President.*
JENNINGS O'BANNON, *Secretary.*
Barnwell Court-House,
January 19th, 1824.

* * *

FROM THE DEMOCRATIC PRESS.

AGRICULTURAL REMARKS,

On the state of Pennsylvania, Anno 1823.

We have reason to be thankful for the munificence of nature this year. The farmer's cup of joy would indeed have been full to overflowing, had not disease checked his industry, and clouded the brightness of his rural prospects.

The spring was pleasant and seasonable, and the heat of the summer moderate, accompanied by plentiful showers.

Within 20 miles of Philadelphia, the average of Farenheit's Thermometer was in June 73 and 2-3°.

The prevailing winds were, S. W. N. W. N.

There were 9 rains—10 clear and 14 cloudy days. —*No thunder and lightnings.*

In July, average thermometer 73 2-3 degrees, prevailing winds, S. W., N. W., N. E.—8 falls of rain—20 clear days, and 11 overcast. This month was remarkably cool. The Thermometer stood on the morning of the 1st. at 58°. We had several gales of wind, but little *thunder and lightning*—it occurred twice only, and a total eclipse of the moon on the night of the 22d.

In August, average thermometer 78 1-3 degrees. —prevailing winds S. W., S. E., N, E.—10 rainy days, 18 clear, and 13 cloudy and overcast,—*very little thunder and lightning.* The weather was unusually cold.

In September, average thermometer 70 degrees, prevailing winds N. E., N. W., S. E.—9 rainy days,—15 clear, and 15 cloudy. This month was cold. There was frost on the 22d and ice on the 30th. *No thunder and lightning.*

The productions of the year, may be estimated as follows.

Corn was abundant. The repeated showers followed by a warm sun, caused it to grow with great vigor. It was the best corn season for many years.

Wheat generally, not good. Perhaps to be attributed to the deficiency of snow last winter.

The crops of *Rye*, and *Oats*, and *Hay* were plentiful.

Pasture rich and very good during the summer and fall. Refreshing and nourishing showers preserved the grass green and vigorous.

Peaches, scarce and of an inferior quality.

Apples, not so good and abundant as last year, but no deficiency. They were not in much demand for exportation. The consequence was, an unusual quantity of *cider* was made. The *Crab Cider* was of superior flavour and quality.

All other fruits generally good, and of sufficient quantities.

Green Peas, plenty.

Potatoes in great abundance. Our markets overflowing. Not I believe from any increase in their culture, but the productiveness of the season.

Turnips, uncommonly large and abundant.

Our winter vegetables, celery, cabbage, ruta baga, beets, radishes, &c. very fine.

The summer of 1823, was in many respects peculiar. It was the coldest since 1816, and the most prolific in showers. I have paid some attention to the seasons for many years, and I do not recollect one where there was so little *thunder and lightning*. This observation applies with almost equal force to the summers of 1821—22. The summer and fall were very sickly. Might not this be owing to the deficiency of electric fluid in the air? If epidemic diseases are generated by animalculæ, may not these be destroyed by electricity?

These hints and reflections would soon lead me out of my depth. I shall therefore leave them to the investigation of natural philosophers and physicians. AGRICOLA.

DIRECTIONS FOR BOILING POTATOES.

We copy the following from the Irish Farmer's Journal, a very good authority on such a subject.

How to boil potatoes nicely without waste.—Seldom do we see potatoes well cooked, and still seldomer do we see them cooked without waste. By the following directions, both ends will be attained. Choose your potatoes of equal size, and put them into a saucepan or pot without a lid, with no more water than is sufficient to cover them; more would only spoil them, as the potatoes themselves, on being boiled, yield a considerable portion of water. By being boiled in a vessel without a lid, they do not crack, and all waste is prevented. After the water is come nearly to boil, pour it off, and replace the hot by cold water, into which throw a good portion of salt. The cold water sends the heat from the surface to the heart of the potato, and makes it mealy. Like all other vegetables, they are improved by being boiled with salt, which ought not, therefore, to be spared. The only proper test of their being done enough, is trying them with a fork. When they are boiled with a lid, cracking is usually considered as the test of their being done enough; but they will often crack when they are quite raw in the heart. After straining off the water, they should be allowed to stand ten or fifteen minutes on the fire to dry.

* * *

The following recipe to cure a cold, is said to be so efficacious, that we republish it at the request of a correspondent who has tested its virtues.

Take a large tea-spoonful of flaxseed, with two penny worth of stick licorice, and a quarter of a pound of sun raisins. Put them into two quarts of soft water; and let it simmer over a slow fire, till it is reduced to one; then add to it a quarter of a pound of brown sugar candy, pounded, a table-spoonful of white wine vinegar; or lemon juice.

Note. The vinegar is best to be added only to that quantity you are going immediately to take; for if it be put into the whole, it is liable, in a little time to grow flat.

Drink half a pint at going to bed; and take a little when the cough is troublesome.

This recipe generally cures the worst of colds in two or three days; and if taken in time, may be said to be almost an infallible remedy. It is a sovereign balsamic cordial for the lungs, without the opening qualities, which endanger fresh colds on going out. It has been known to cure colds, that have almost been settled into consumptions, in less than three weeks.

HUSWIFERY ADMONITIONS.

Written Three Centuries back.

Learn you that will thee,
This lesson of me.
1. No breakfast of custom, provide for to save,
Not only for such as deserveth to have.

2. No shewing of servant, what victuals in store,
Shew servant his labour, and shew him no more.

Of havock beware,
Cat nothing will spare.
3. Where all thing is common, what needeth a hutch?
Where wanteth a saver, there havock is much.

4. Where window is open, cat maketh a fray,
Yet wild cat with two legs, is worse, by my fay.

Look well unto thine;
Slut slothful must whine.
5. An eye in a corner who useth to have,
Revealeth a drab, and preventeth a knave.

6. Make maid to be cleanly, or make her cry creak;
And teach her to stir, when her mistress doth speak.

Let holly wand threat,
Let Fizgig be beat.
7. A wand in thy hand, though ye fight not at all,
Makes youth to their business, better to fall.

8. For fear of fool had I wist, cause thee to wail
Let Fizgig be taught, to shut door after tail.

Too easy the wicket,
Will still appease clicket.
9. With her that will clicket, make danger to cope,
Lest quickly her wicket seem easy to ope.

10. As rod, little mendeth, where manners be spilt,
So naught will be naught, say and do what thou wilt.

Fight seldom ye shall,
But use not to brawl.
11. Much brawling with servant, what man can abide?
Pay home when thou fightest, but love not to chide.

12. As order is heavenly, where quiet is had,
So error is hell, or a mischief as bad.

What better a law,
Than subjects in awe?
13. Such awe as a warning will cause to beware,
Doth make the whole household the better to fare.

14. The less of thy counsel thy servants do know,
Their duty the better, such servants shall shew.

Good music regard,
Good servants reward.
15. Such servants are oftenest painfull and good,
That sing in their labour, as birds in the wood.

16. Good servants hope justly, some friendship to feel,
And look to have favour, what time they do well.

By once or twice,
'Tis time to be wise.
17. Take Runagate Robin, to pity his need,
And look to be filched, as sure as thy creed.

18. Take warning by once, that a worse do not hap,
Forsight is the stopper of many a gap.

Some change for a shift:
Oft change, small thrift.
19. Make few of thy counsel, to change for the best,
Lest one that is trudging, infecteth the rest.

20. The stone that is rolling, can gather no moss,
For master and servant, oft changing is loss.

Both liberall sticketh,
Some provender pricketh.
21. One dog for a hog, and one cat for a mouse;
One ready to give is enough for a house.

22. One gift ill accepted, keep next in thy purse,
Whom provender pricketh, are often the worse.

ON A SCULL.

lines by Lord Byron are hardly
let's meditations in the grave

ken arch, its ruin'd wall,
esolate and portals foul,
nce ambition's airy hall,
ught, the palace of the soul.
each lack-lustre eye-less hole
of wisdom, and of wit.
it, sage, sophist ever writ
ly tower—its tenement refit!

THE FARMER.

BALTIMORE, FRIDAY, MARCH 19, 1824.

☞ NOTICE TO SUBSCRIBERS.—Those who continue their subscription to the Farmer, are respectfully reminded that the *best proof* they can give of their approbation of our labours, will be a prompt compliance with the stipulated terms of subscription, which will remain, as heretofore, to wit:

To those who take the risk of all casualties, $4 per annum, payable *in advance*—but those who prefer, as we hope most of them will, to pay $5 in advance, will be entitled to have each paper supplied, which may happen, from any cause, *not to reach them in good order*, and an agricultural almanack, in the bargain. The almanack, besides the contents of common almanacks, will have recipes, short essays, &c. connected with the farmer's and the *housewife's* duties and business. Those who prefer the payment of four dollars, are assured that the Farmer is *regularly put up* and sent off in *at least as good condition*, and with as much security for its safe arrival, as any paper in the United States, excepting always that invaluable work, Niles' Weekly Register.

☞ The money whether four or five dollars, to be remitted, in all cases, directly BY MAIL, at the Editor's risk—he, requiring only the word of the subscriber that the money was deposited in the neighbouring post-office. ☞ The difficulty arising from the impracticability of getting $4 notes, in many places, may be obviated in this way.—Let the subscriber send a $5 note, with a request that the odd dollar be passed to his credit for three months of the succeeding year, and it will be done: but where $5 are received, without any such *wish expressed* by the subscriber, it will be taken for granted, that his desire is to be considered as a *guaranteed* subscriber, and entitled to an Agricultural Almanack, and he will be so entered on the books. ☞ Lastly, the Editor assures his friends, that from the variety and value of materials on hand, the regularity of his supply from abroad, of such publications as afford matter adapted to this journal, and above all, from the number, zeal, intelligence and generous publick spirit of his correspondents in all the states of our own blessed country, with her infinitely diversified soil and climate, and unexplored resources of Agriculture and Natural History, he can promise, *without fear of failure*, that the Farmer will continue to be at least as *well worthy* of their patronage as heretofore; to say nothing of *improvements* in the plan and substance of the work, which ought to be expected from greater experience and facilities, and undiminished fondness for the subject.

The most inattentive observer, must have perceived the progress of publick opinion, within the last few years, in attaching more respectability, and a higher moral consideration to the business and character of the Farmer, embel- kept at work to win his [illegible] with researches in Natural His- by accomplishing the ground in two hours an' twenty-five minutes, with apparent ease.

Extraordinary Kidney.—A small four-year old heifer was last week slaughtered by Mr. Mu lins, butcher, of Maidstone. Upon opening th animal, one of the kidneys was found to be of a amazing size, the solid suet being computed t weigh at least ten stone, and measures in circun ference full four feet. The exact weight cann at present be ascertained, as the kidney is not y removed from the side to which it grew. T other kidney was of an ordinary size. The hei

how much more useful and honorable are the resolutions, which thus lead them, to renounce the unmanly and enervating pleasures, and pursuits of the town, of which, if ever, it may now be truly said

"Where news and politicks divide mankind,
"And schemes of state involve th' uneasy mind,
"Faction embroils the world; and every tongue
"Is mov'd by flattery, or with scandal hung:
"Each rival Machiavel with envy burns,
"And honesty forsakes them all by turns;
"While calumny upon each party's thrown,
"Which both promote, and both alike disown:"

To seek, where "all the grateful country breathes delight," the invigorating toils of the field, and the never tiring studies of nature.

It is from reflections like these, and not from the vanity, which is the growth of overweening partiality, for our own offspring, that we anticipate the time, when every tiller of the soil, will patronise the "AMERICAN FARMER." To the intelligence and the liberality of our correspondents, we owe unspeakable gratitude, for enabling us to say with confidence to *every farmer*, that in its pages, his wife may find the most valuable recipes, and instructions in every branch of household industry—that his children may find in them, amusement and edification, and that to himself, they will furnish the results of experiments and practical directions, applicable to the whole circle of agricultural operations—finally, we ask the favour of all those, who think its usefulness not overrated, not only to consider themselves as agents to receive subscriptions, but that the Editor will feel himself under particular obligations to all those, who by sending him a *single* subscriber, so far enable him to continue, the *first American Journal*, devoted exclusively to the instruction and benefit of the agriculturists of America. To promote their interests, to defend their rights, to deserve *their* esteem, and to exalt and embellish their vocation, in the estimation of themselves, and of mankind, is the greatest pride, and the highest ambition of their humble servant,

THE EDITOR.

☞ The Editor has occasion to beg pardon of many, amongst his most esteemed correspondents, for inattention to letters, which civility, as well as duty and feeling require to be answered. But for some weeks he has been confined to his room, by protracted indisposition, until the file of unanswered letters, has become unusually voluminous—in postponing the demands of correspondents, it often happens, that the greatest license is taken with friends, nearest to our heart, of whom we are apt to think—"He knows the sincerity of my regard, another day will do for him." We shall, however, take the first moment, to wipe off these old scores, and the commencement of the Editorial, like the beginning of every year, brings with it the mental resolution—at least, to turn over a new leaf, and do better for the time to come.

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ERRATA, in the article on Seeds, in Farmer No. 50.—2d paragraph, 4th line, for *their* read *the same* vicinity—14th line, for *brassida* read *brassica*—5th paragraph, 1st line, for *pods* read *seeds*—8th paragraph, 3d line, for *gum* read *germ*—7th line, for *feminal* read *seminal*—17th line, for *alkilus* read *alkalies*.

BALTIMORE MARKET.

PRICES CURRENT—CORRECTED WEEKLY.

Wharf flour, $5 62½—Howard-street, do. $5 75—Best family do. retail, $7—Wheat, red, $1 15 to $1 17—Corn, 35 cts.—Rye, 40 cts.—Oats, 28 to 30 cts.—Whiskey, 25 to 27—Butter, inspected, 10 to 15 cts.—Coal, Liverpool, bushel 40 to 45 cts.—Virginia, 28 cts.—Susquehannah, per ton $6 50 to $7—Rice, per cwt. $3 75 to $4—Beef, northern mess, per barrel $10—Cargo, No. 1, $8 to 8 50—do. No. 2, $6—Baltimore prime, $10—Bacon and hams, 10 to 11 cts.—Cotton, W. I. Island, 18 to 20 cts.—Louisiana, &c. 16 to 17 cts.—Georgia upland, 14 to 16 cts.—Alabama, 12 to 13 cts.—Candles, mould, 12 to 13 cts.—Dipt, 10 to 11 cts.—Spermaciti, 25—Feathers, live, 30 to 35 cts.—Fish, herrings, Susquehanna, $2 75—Fall mackarel, No. 1, to 3, $4 50 to $7—Shad, trimmed, $6 to 6 50—Flax seed, rough, per bushel, 70 to 75 cts.—cleaned, cask, $8—Flax, per lb. 10 to 11 cts.—Hemp, Russia, $1 75 ton,—Country dew rot, 7 cts. per lb.—do. water rot, 9 cts.—Hops, fresh, 35 cts. per lb.—Hides, dryed, 15 to 19 cts. per lb.—Hog's lard, 12 cts. per lb.—Lime, per bushel, 30 to 33 cts—Leather, soal, best, 24 to 27 cts. per lb.—do. Eastern tan, 18 to 20 cts.—Lumber board measurement, cargo prices:—Of the following articles we give the yard prices.—Oak timber and scant. $1 to 1 25—Boards all sizes, $1 50 to 2—Pine scantling, do. $1 to 1 25—Boards 4-4, $1 to 1 25—White do. 5-4, $1 75 to 2 50—do. co. 4-4, $1 15 to 1 30—do. cl. 4-4, $1 80—Shingles, cyp 18 in., $3 to 3 50—Shingles, junip. 24 do. $7 50 to 7 75—jun. com. $3 50 to 5—Staves, W. O. pipe, $40 to 45—do. hhd. $25—do. bbl. $15 to 17—R. O. bbl. $15—do. hhd. $17—Wool, fleece, merino full blood, 35 to 40 cts. per lb.—Cropped, 28 to 30 cts.—Common country, 20 to 30 cts.—Skinner, 35 to 40 cts.—When assorted and cleaned, any of the above will obtain an advance of 15 to 20 cts.

Prices of Seed.—Orchard Grass per bushel, $2 50—Lucerne, per lb., 50 cents—St. Foin, do. do. $7—Red Clover, do. do. $5 50—Timothy, do. do. $4—Herds Grass, do. do. $2—Millet, do. do. $1—Mangel Wurtzel, do. do. $1 50—Ruta Baga, do. do. $1.

Retail prices of provision market—Beef, prime pieces, 10 cts.—Veal, 10 cts.—Mutton, 5 to 7 cts.—Turkeys, 75 cts. to 1—Geese, 50 to 56 cts—Ducks, Canvasbacks, $1 25 to 2—Red heads, 50 to 75 cts.—Chickens per pair, 50 to 62½ cts.—Eggs, 12½ cents—Butter, first quality, 20 to 31 cts.—Turnips, per bushel, 50 cts.—Potatoes, do. 50 cts.

For Sale.

A very fine stallion colt, two years old this Spring. He was got by the Cleveland Bay Horse imported by Mr. Robert Patterson from England, and out of a very fine half blooded mare.

For terms apply to the Editor of this paper.
February 24, 1824.

CONTENTS OF THIS NUMBER

Extraordinary crop of Mangel Wurtzel---The Agriculture of Flanders, Manner of Feeding Horses and Cows in different Districts---Preservation of Flesh Meat---Flour—Life, Duration of—The Diseases of Domestic Animals and their Cure---A Comparison between the advantages and disadvantages of Agriculture in Britain and in America---Some Account of the origin of Cards---Herefords and Short Horns--Match for 100 Sovereigns---Extraordinary Kidney---Advice---To kill Cockroaches---What Revolutions in the Moral World!!--Agricultural Premiums---Agricultural Remarks on the State of Pennsylvania---Directions for boiling Potatoes---Receipt for a Cold---Huswifery Admonitions---On a Scull---Editorial Remarks---Prices Current---Advertisement, &c

END OF VOLUME FIVE.

ains—10 clear and 14 cloudy days.
ınd lightnings.
age thermometer 73 2-3 degrees,
s, S. W., N. W., N. E.—8 falls
ır days, and 11 overcast. This
arkably cool. The Thermome-
morning of the 1st. at 58°. We
:s of wind, but little *thunder and*
:curred twice only, and a total
ıoon on the night of the 22d.
:rage thermometer 78 1-3 degrees.
nds S. W., S. E., N, E.—10 rai-
ır, and 13 cloudy and overcast,—
der and lightning. The weath-
y cold.
r, average thermometer 70 de-
ıg winds N. E., N. W., S. E.—
·15 clear, and 15 cloudy. This
There was frost on the 22d and
No thunder and lightning.
ɔns of the year, may be estimated

undant. The repeated showers
·arm sun, caused it to grow with
was the best corn-season for ma-

ally, not good. Perhaps to be at-
leficiency of snow last winter.
Rye, and *Oats*, and *Hay* were

ınd very good during the summer
·eshing and nourishing showers
rass green and vigorous.
ce and of an inferior quality.
ı good and abundant as last year,
y. They were not in much de-
ation. The consequence was, an
· of *cider* was made. The *Crab*
ɔerior flavour and quality.
its generally good, and of suffi-

ılenty.
reat abundance. Our markets
ot I believe from any increase in
ıt the productiveness of the sea-

ımmoniy large and abundant.
egetables, celery, cabbage, ruta
ishes, &c. very fine.
of 1823, was in many respects
ıs the coldest since 1816, and the
showers. I have paid some at-
:asons for many years, and I do
: where there was so little *thun*
ɡ. This observation applies with
·ce to the summers of 1821—22.
d fall were very sickly. Might
; to the deficiency of electric flu-
f epidemic diseases are genera-
æ, may not these be destroyed by

ıd reflections would soon lead me
. I shall therefore leave them to
ın of natural philosophers and

AGRICOLA.

FOR BOILING POTATOES.

ollowing from the Irish Farmer's
good authority on such a subject.
tatoes nicely without waste.—Sel
potatoes well cooked, and still
see them cooked without waste.
directions, both ends will be at-
your potatoes of equal size, and
saucepan or pot without a lid,
ater than is sufficient to cover
uld only spoil them, as the pota
on being boiled, yield a consid
f water. By being boiled in a
ı lid, they do not crack, and all waste is prevented. After the water is come nearly to boil, pour it off, and replace the hot by cold water, into which throw a good portion of salt. The cold water sends the heat from the surface to the heart of the potato, and makes it mealy. Like all other vegetables, they are improved by being boiled with salt, which ought not, therefore, to be spared. The only proper test of their being done enough, is trying them with a fork. When they are boiled with a lid, cracking is usually considered as the test of their being done enough; but they will often crack when they are quite raw in the heart. After straining off the water, they should be allowed to stand ten or fifteen minutes on the fire to dry.

The following recipe to cure a cold, is said to be so efficacious, that we republish it at the request of a correspondent who has tested its virtues.

Take a large tea-spoonful of flaxseed, with two penny worth of stick licorice, and a quarter of a pound of sun raisins. Put them into two quarts of soft water; and let it simmer over a slow fire, till it is reduced to one; then add to it a quarter of a pound of brown sugar candy, pounded, a table-spoonful of white wine vinegar; or lemon juice.

Note. The vinegar is best to be added only to that quantity you are going immediately to take; for if it be put into the whole, it is liable, in a little time to grow flat.

Drink half a pint at going to bed; and take a little when the cough is troublesome.

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ON A SCULL.

[The following lines by Lord Byron are hardly inferior to Hamlet's meditations in the grave yard.]

Look on its broken arch, its ruin'd wall,
Its chambers desolate and portals foul,
Yes, this was once ambition's airy hall,
The seat of thought, the palace of the soul.
Behold through each lack-lustre eye-less hole
The gay recess of wisdom, and of wit
Can all that saint, sage, sophist ever writ
People this lonely tower—its tenement refit!

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to 30 cts.—Whiskey, 25 to
ed, 10 to 15 cts.—Coal, Liv
45 cts.—Virginia, 28 cts.—Su
$6 50 to $7—Rice, per cwt
northern mess, per barrel
$8 to 8 50—do. No 2, $6
$10—Bacon and hams, 10 to
I. Island, 18 to 20 cts.—Louisi
—Georgia upland, 14 to 16 c
13 cts.—Candles, mould, 12
to 11 cts.—Spermaciti, 25—
35 cts.—Fish, herrings, Susqu
mackarel, No. 1, to 3, $
trimmed, $6 to 6 50—Flax
bushel, 70 to 75 cts.—clean
per lb. 10 to 11 cts.—Hemp,
Country dew rot, 7 cts. per
9 cts.—Hops, fresh, 35 cts.
ed, 15 to 19 cts. per lb.—
per lb.—Lime, per bushel,
ther, soal, best, 24 to 27 cts
tern tan, 18 to 20 cts.—Lumb
ment, cargo prices:—Of th
we give the yard prices.—
scant. $1 to 1 25—Boards a
—Pine scantling, do. $1 to
$1 to 1 25—White do. 5-4,
co. 4-4, $1 15 to 1 30—do. cl
gles, cyp 18 in., $3 to 3 50—
do. $7 50 to 7 75—jun. com.
W. O. pipe, $40 to 45—do.
$15 to 17—R. O. bbl. $15
Wool, fleece, merino full b
per lb.—Cropped, 28 to 30 c
try, 20 to 30 cts.—Skinner, 3
assorted and cleaned, any of
tain an advance of 15 to 20

Prices of Seed.—Orchard
$2 50—Lucerne, per lb., 50
do. $7—Red Clover, do. do. $
do. $4—Herds Grass, do. do.
$1—Mangel Wurtzel, do. do.
do. do. $1.

Retail prices of provision m
pieces, 10 cts.—Veal, 10 cts.—
Turkeys, 75 cts. to $1—Ge
—Ducks, Canvasbacks, $1 2
50 to 75 cts.—Chickens per
—Eggs, 12½ cents—Butter,
31 cts.—Turnips, per bushe
do. 50 cts.

For Sal

A very fine stallion colt,
Spring. He was got by the C
imported by Mr. Robert Patt
and out of a very fine half blo
For terms apply to the Edi
February 24, 1824.

CONTENTS OF THIS

Extraordinary crop of Mangel W
ture of Flanders, Manner of Feedin
different Districts---Preservation of
Life, Duration of---The Diseases of
their Cure---A Comparison between
advantages of Agriculture in Brit
Some Account of the origin of Cards
Horns---Match for 100 Sovereigns--
---Advice---To kill Cockroaches---W
Moral World!!---Agricultural Prem
marks on the State of Pennsylvania
Potatoes---Receipt for a Cold---Husw
a Scull---Editorial Remarks---Price
ment, &c

END OF VOLUM